THE OIL WEEKLY

ENGINEERING « NEWS » STATISTICS

EDITORIAL STAFF

WARREN L. BAKER
Editor

J. KENT RIDLEY
Managing Editor

ASSOCIATE EDITORS

L. J. LOGAN — WM. V. GROSS

DISTRICT EDITORS

B. F. LINZ.....Washington
FRANK TAYLOR.....Tulsa
H. H. KING.....Fort Worth
R. W. BYRAM.....Austin
ELTON STERRETT, GILBERT M. WILSON, RIVERS REAVES.....Houston

PUBLISHED BY
THE GULF PUBLISHING COMPANY
HOUSTON, TEXAS

R. L. DUDLEY, *President*
A. L. BURNS, *General Manager*
S. W. ROBINSON, *Editorial Director*
TOM W. NELSON, *Advertising Manager*

Staff correspondents at all important points.

Member Audit Bureau of Circulation
Member Associated Business Papers, Inc.

BRANCH OFFICES

NEW YORK.....250 Park Ave.
PITTSBURGH.....429 Fourth Ave.
CHICAGO.....332 S. Michigan Ave.
LOS ANGELES.....W. W. Wilson Bldg.
Huntington Park, Calif.
TULSA.....Hunt Bldg.
FORT WORTH.....W. T. Waggoner Bldg.
WASHINGTON.....Albee Bldg.

ADVERTISING STAFF

DICK SWINSKY.....New York
C. A. WARDLEY.....Pittsburgh
H. G. FITZPATRICK.....Chicago
J. F. CARTER, JR.....Tulsa
JAY CURTS, JR.....Los Angeles
CHAS. WYATT.....Houston

CIRCULATION DEPARTMENT

J. T. WAGONER.....Manager

SPECIALIZED OIL JOURNALS
Published by
THE GULF PUBLISHING COMPANY

The Oil Man's Calendar

OCT.	
27–29	**National Safety Congress and Exposition, Chicago.**
29–31	**AIME Petroleum Division, Austin, Texas.**
30–31	**Illinois Mineral Industries Conference, Urbana.**
NOV.	
6	**California Natural Gasoline Association, Los Angeles.**
9–13	**American Petroleum Institute, Palmer House, Chicago.**
16–18	**American Institute of Chemical Engineers, Netherlands Plaza Hotel, Cincinnati.**
17–21	**National Chemical Exposition, and Industrial Conference, American Chemical Society, Chicago.**
19–20	**American Association of Oilwell Drilling Contractors, Tulsa.**
DEC.	
2	**New Mexico Oil and Gas Association, Artesia Hotel, Artesia.**

Contents · October 26, 1942

Volume 107, Number 8

The Changing Panorama..... 9

Feature Section:

Washington Roundup 11
By B. F. LINZ

Alarming Downward Discovery Trend Must Be Reversed.15
By HAROLD L. ICKES

Equipment and Supplies Will Continue Hard to Get.....17
By G. W. ORTON

Michigan Oil Exploration More Important in Wartime...19
By N. X. LYON

What Happens When Sucker Rod Breaks.....30

Trailer House Makes Deluxe Portable Doghouse.....32

Stretching a Lathe.....33
By ELTON STERRETT

Practical Operating Hints for the Drilling Rig.....36

Independents Declare Only Higher Prices Will Prevent Oil Shortage 42
By WARREN L. BAKER

News Section and Index.....39

Looking Ahead With the Editor..... 2

Notes for the Equipment Buyer and User.....62

Squeaks from the Bull Wheel.....61

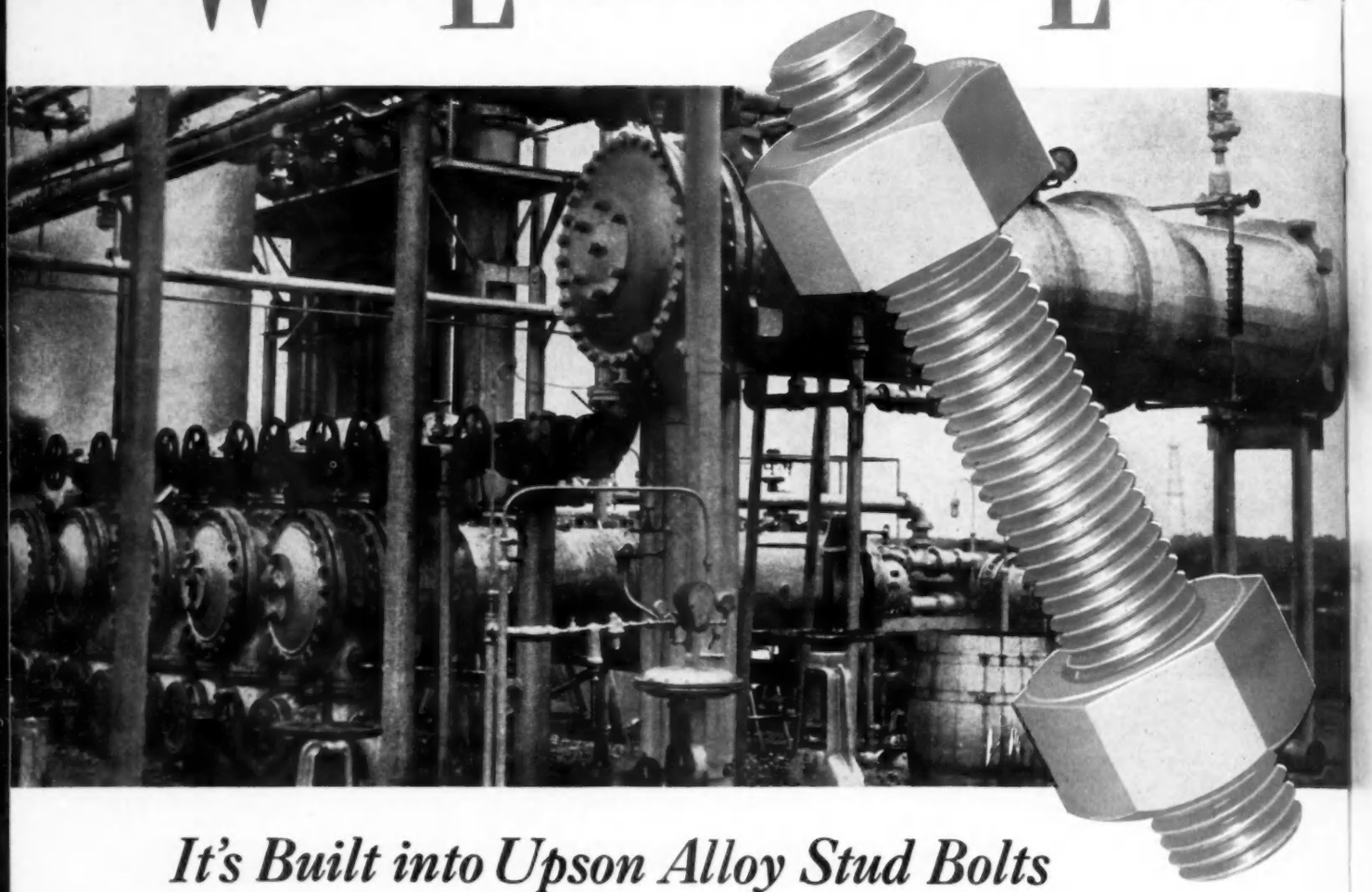
Index to Advertisers.....64

CENSORSHIP NOTICE—Censorship rules occasionally make it necessary to tear out or otherwise delete parts of publications destined to subscribers outside the United States. If there be such deletions in copies of THE OIL WEEKLY going abroad, they are at the request of the Office of Censorship. Copies sent abroad face unavoidable delay because of time necessarily consumed in passing the publication through the Office of Censorship.—*The Publisher.*

Published every Monday. Single Copies 15 cents (Except Special Issues). Subscription price: domestic and foreign, $2.00 a year; 2 years $3.00. Entered as second-class mail matter December 23, 1916, at the post office at Houston, Texas, under act of March 3, 1879. Subscription restricted to those engaged in the producing and pipe line branches of the oil industry or the manufacturing and distribution of oil field supplies. Advertising rates on application.

Copyrighted 1942 by The Gulf Publishing Company.

Strength to Take the Strains OF WAR EMERGENCY LOADS



It's Built into Upson Alloy Stud Bolts

Never before in history has it been so vital for the Refining Industry to keep every unit "on stream."

The growing hordes of Allied ships, planes and tanks need Oil and Gasoline—the source of their fighting power in the Battle for Victory. And with many world oil centers already in Axis hands, a tremendous load falls upon our refining capacity.

The strain on our facilities will be great under this top-heavy war load. And equipment must be able to take it—without frequent time-out for repairs and replacements.

Republic Upson Alloy Stud Bolts can help you reduce stud replacement as a reason for "off stream" periods. They're born tough in the furnace—and they get tougher with each step in their processing and production. Taking tight wrenching, severe heat, extreme pressures and corrosion is all in a day's work for these sturdy Upson studs.

Insist on longer life from your stud connections. Specify Republic Upson Alloy Studs for all replacements, for all new structures.

REPUBLIC STEEL CORPORATION
Bolt and Nut Division: Cleveland, Ohio
Berger Manufacturing Division • Culvert Division
Niles Steel Products Division • Steel and Tubes Division
Union Drawn Steel Division • Truscon Steel Company
Export Department: Chrysler Building, New York, New York

REPUBLIC

Upson Quality BOLTS AND NUTS

Other Republic products include Electric Weld Casing, Tubing and Line Pipe—Electrunite Boiler and Heat Exchanger Tubes

The Changing Panorama

The Fourth Factor—Management

IN THE call to service, we are told that men, money and munitions are vital to the winning of this war and so they are. But there is still another factor needed for the successful promotion of any enterprise, peacetime or wartime—a factor as essential to the winning of this war as men, money and munitions. That factor is management—management of the men, money and munitions; management by the government of all of its resources.

Without it we can lose this war as a Congressional committee so starkly put it early this week.

Many people fear we are not getting as much of that war-winning brand of management from official Washington as we should. They wonder at the paucity of thinking involved, for instance, in a desperate governmental appeal to the public to buy bonds when a government agency, created during the depression to provide jobs for the jobless, continues now at a time when anyone who wants a job can get one for the asking; when the annual payroll of that government agency in the county in which this is written would pay the interest on $60,000,000 of these war bonds for a year; when that payroll in this county alone would build each year more than 30 tanks!

They wonder that even if Washington has been too busy with other things to originate its own pruning, it has not taken notice that in county after county throughout the United States, county officials themselves have been withdrawing local support to "relief" funds because the burden of contributions to those funds is too great for the citizenship to bear and carry on its war effort.

God knows that the American public is desperately anxious that this war be won and be won quickly, if possible. And the public knows that any extension of the war means more lives lost among our loved ones. The public knows, too, that poor management can string out this war unnecessarily to the point where there will be few families left not wearing the badge of death in action and a heart full of bitterness against those whose inaptitude for successful management and action slaughtered thousands needlessly.

Sure, the American people can stand reverses—stand them and take them like the men and women they are, but by the same token the American public will not long stand without voicing protest against the substitution of politics for patriotism, pressure groups for preservation, bungling for basic common sense.

Eastern readers of FOREIGN COMMERCE WEEKLY, *published by the United States Department of Commerce, should grumble less over the gasoline shortage after having seen the back cover of a recent issue. It consisted of a picture of a torpedoed, burning tanker going down, and over it were these words: "Another tanker torpedoed off the Atlantic Coast! . . . Should brave men die so you can drive . . .?"*

Drilling Crews and Gasoline Rationing

DRILLING crews have a particularly difficult task in obtaining gasoline ration quotas, because they never know how far or how close their next drilling operation may be from town. Unlike milk trucks, war defense plant workers and others, they do not have a fixed distance to travel to and from work.

Therefore, it would seem wise for all drilling contractors to instruct their crews to make these conditions known when they obtain their first coupon books. Just what OPA may decide to do in such cases, of course, is not known. But if the difficulties of fixing a set limit is called to the attention of OPA no harm will be done and perhaps some good. The American Association of Oilwell Drilling Contractors, between now and November 9, might take the matter up with the OPA, so that the regional offices may have the benefit of a ruling before drilling crew members register for their coupons.

Time Favors Japs in Reworking Dutch Oil

EYEWITNESSES have brought back detailed accounts of the destruction of oil properties in the Dutch East Indies by their owners, when the Japs came. A demolition squad at Palembang smashed everything within its reach, one emptied boilers and lighted fires beneath them, another set turbines running and threw sand into them. Oil was released from tanks and set afire by incendiary bombs. Although some of the electrical detonation points were made ineffective by enemy shelling and previous heavy rains, the carefully designed system for blowing up refinery properties was successful, and when resorted to, explosions were heard for many miles and enormous flames shot high into the air and burned so fiercely that heat was hardly bearable for the retreating Dutch half a mile removed, across the Musi River. Diesel engines, tanks, and other equipment were blown to pieces. The 90-mile pipe line to the oil field at Pendopo was destroyed. Finally, although the properties were leveled and wrecked, Dutch troops fired mortar shells into them. Left for the Rising Sun to rise on were the ruins of what had been a billion guilders' (half billion dollars') worth of workshops, refinery installations, warehouses, offices, social halls, radio station, telephone station, printing plant, and private residences.

Now in the East Indies, within Nippon's "Co-Prosperity Sphere," plantations idle for lack of markets and funds for paying wages. Bus service has been severely curtailed. Private automobiles may not be used. Production in most lines, as well as commerce, had not been restored by the Japanese on any important scale by summer.

Nevertheless, the rich oil reserves of the East Indies, one of the primary objectives of Japan's war lords, now are theirs to redevelop. And time works in favor of the invader.

Nazi Planning Way Ahead of Performance

NAZI economic planning is so advanced that the planners must be impatient with the military performance which has been offered in furtherance of their aims.

Kontinentale Oel A. G. (Continental Oil Corporation), was set up by the Reich in Berlin in the early part of 1941 to control production and distribution of critically needed petroleum, and it already is exploiting the oil output of Axis-controlled Europe. Furthermore, in line with Nazi dreams of a self-sufficient Europe under German control, which would require the oil of Russia and the Near East, the oil concern is drawing up plans to operate the rich fields of the Soviet Union, Iran, and Iraq—"when" they fall into German hands.

Kontinentale Oel was established with capital of 80,000,000 reichsmarks, nominally $32,000,000, but plans called for

expansion of capital in line with future increases in operations.

Interests that joined in founding the corporation included I. G. Farben, huge chemical concern, Braunkohle Benzin A. G., synthetic-motor-fuel company, and Vereinigte Stahlwerke, steel and chemical concern, and other large German industrial and banking interests.

Even some Germans now must consider as premature any serious planning of the oil company's operations in Russia and the Near East.

Oil Shortages Bring Many Substitutes

AS THE war grows longer, petroleum becomes shorter—throughout the world. Germany is resorting increasingly to the inferior substitutes, having provided distribution facilities for supplying 10,000 vehicles a day with compressed gas, such as city gas and coke-oven gas, in order to save better substitutes as well as petroleum for military use. Wood and coal are scarce for making producer gas to propel vehicles, and peat is being substituted for them. (Germany also has a serious shortage of motor trucks, as evidenced by use of barges and tugs on the River Spree in Berlin, and by the fact Germany has "persuaded" the Vichy government to deliver 35,000 motor trucks for Germany use.)

Meanwhile, lack of gasoline in France has resulted in plans for 19 new trolley-bus lines in the Paris area, although such equipment had very little use there before the war. The buses will have emergency gasoline-generator equipment for reaching terminals when electric current fails.

A horse-drawn coach put into service between Rathkeale and Limerick, Ireland, attracted heavy business, and a second coach has been employed, while more will be used.

Peanut oil and other vegetable oils have had to substitute for mineral oil lubricants in French Morocco, although needed for human consumption.

Gasoline shortage in Chile, having reduced trucking and forced increased use of railways, has contributed to shortage and rationing of coal; and to substitute for gasoline, increased alcohol production will be sought, along with use of producer-gas-generating equipment for vehicles, while exploration for oil fields will be attempted, plans calling for seeking aid of American geologists.

Sweden is experimenting in production of low-grade lubricants from pine-tar-oil distillate from tree stumps, for simple lubrication in industry.

Hit by gasoline rationing, some traveling salesmen in Canada are boarding freight trains and riding in cabooses to cover their territories, when accommodations in passenger trains are not available.

Reserves and Exploration

By DR. F. H. LAHEE, Sun Oil Company

THE following summary and recommendations concerning United States petroleum reserves were presented by Dr. F. H. Lahee, Sun Oil Company, Dallas, before the O'Mahoney hearings in Washington last week and are presented here to emphasize the magnitude of the problem of keeping the oil industry geared to war requirements:

"We have, in this country, oil reserves which may be classified under five heads, as follows:

1. Proved reserves of roughly nineteen and one-half billion barrels, as of January 1, 1942, estimated essentially on the basis of a dollar per barrel;
2. Reserves of oil within present pay sands and limes of producing fields, but beyond the area as yet proved by drilling;
3. Reserves which can be added to Class 1 by the installation of gas drive or of water drive in pools not now provided with such artificial drive;
4. Reserves of oil (a) which may be present in prospective sands below the producing sands in known fields, or (b) which may be present in untapped sands that lense out on the flanks of known producing structures;
5. Reserves (a) in pools not yet drilled, but probably present on known structures or under land already leased or otherwise set apart, and (b) reserves present on entirely unknown structures or in undefined traps still remaining to be discovered.

"Briefly, we have two main programs recommended:

A. That of producing more oil from our proved and partly proved reserves from classes 1, 2, and 3; and

B. That of exploring for new reserves from classes 4 and 5, such exploration involving both the technical work that includes geological and geophysical research, and the practical work of wildcat drilling.

"It is important to remember that for proper organization and adequate continuous maintenance of these programs, several hanidcaps presently existing must be removed. Some of these are already receiving attention, but no consideration has been given to others.

"Thus, there should be:

A price for crude oil sufficient to stimulate drilling.
Adequate steel for production purposes, as well as for exploration and wildcatting.
Sufficient skilled labor.
Suitable transportation facilities for supplies to go in and for oil to go out.
Sufficient wire, instruments, and raw metals for repairs, etc., for seismographic work.
Sufficient trained technical personnel for geological and geophysical work.
Sufficient rubber for cars which must be used in exploration.

"In other words, it is essential to realize that there are these numerous factors, all of which are intimately tied in to the combined programs of providing more oil and exploring for new reserves. To overlook any one of them might seriously retard the effort."

Let Kiddies Scrape Leases for Scrap

PERHAPS the newspaper-sponsored nation-wide drive for home scrap carries a suggestion which would enable even more scrap to be gleaned from leases and other oil properties. Most of the initial collection into amounts justifying the dispatching of trucks was done by children, greatest interest and most unflagging zeal being shown by those in the grade schools and under the 'teen age.

Now that the maintenance gangs, switchers and other oil company employes have turned in their stint of thrown-away, discarded and lost scrap materials, and are concentrating on the task of forwarding all scrap as it is made, would it not be possible for the children on the leases, aided by those from adjoining farms and rural centers, to abet the efforts of their elders by turning up, spotting and even collecting materials which have escaped the eyes of the company men?

The nation's backlog of scrap for this winter's operations is far short of the minimum demanded by needed steel production. Any means whereby scrap resources can be built up is worth many times the effort demanded.

WASHINGTON ROUNDUP

By B. F. LINZ
Washington Correspondent

Prospect of Extending Big Line to East More Favorable

Representative Cole Puts Problem of Oil Before Roosevelt

Senate Report Says Materials for More Drilling Vital

AUTHORIZATION for immediate construction of the second leg of the Longview, Texas-New York "big-inch" pipe line, became a distinct possibility of the near future last week, when it was learned that governmental agencies concerned have abandoned their former opposition to the use of steel for that purpose.

The project, it was understood, has received the blessing of OPC, WPB, OPA, ODT and Navy, and the War Department is the only "holdout." Officials of that department are represented as opposed to the allocation of a large tonnage of steel for the pipe line, but are expected to abandon their position under the pressure of high administration officials who see in the "big-inch" project the only form of insurance for the East Coast against a possible oil famine in the event of a breakdown of rail facilities.

"Insiders" believe WPB may act quickly on the project, which would carry the line from its present projected terminus at Norris City, Illinois, to the New York-Philadelphia refining area—possibly within a matter of days—and that construction may be undertaken even before the first leg now building is completed.

An important good friend was lost to the industry during the week when Representative William P. Cole, Jr., of Maryland, chairman of the oil group of the House Interstate and Foreign Commerce Committee, resigned from Congress to become a judge in the United States Customs Court.

One of Cole's last acts as a Congressman was to make a personal report to President Roosevelt on the oil situation. He made a strong plea for greater consideration of oil's difficulties. He urged allocation of sufficient materials for necessary drilling, setting of "whatever price is necessary" to assure continued ability of the industry to meet consumptive requirements, and placing of oil control in the hands of one agency.

Coordination of all oil-control activities was given Congressional support during the week in a progress report submitted to the Senate Public Lands Committee by Chairman O'Mahoney of the group which has been surveying possibilities of stimulating exploration.

Most important suggestion in the report, which recommended immediate enactment of the O'Mahoney bill to set a flat royalty of 12½ percent on new oil from the public lands, was for government loans to wildcatters, accompanied by a demand for a steel-production program which would assure adequate material for development work.

The subcommittee pointed out that lack of steel has not only prevented the drilling of 13,000 badly needed wells, but also has slowed up the construction of pipe lines and steel barges, a charge which was reflected in admissions by Coordinator Ickes that difficulties in securing needed new materials may prevent completion of the "big-inch" and Florida pipe lines on schedule.

Permissible spacing patterns for wells drilled in the Illinois Basin were outlined formally October 23 in an amendment to Supplementary Order M-68-5 issued by the War Production Board on the recommendation of OPC. A 10-acre spacing was earlier authorized for Illinois and parts of Indiana and Kentucky for wells under 2500 feet and a 20-acre spacing for deeper wells, and the amendment sets forth the restrictions on the location of such wells.

Recently developed transportation difficulties, which may become more acute under adverse weather conditions, were the basis for a cut in the OPC recommendations for November oil production, brought down to but slightly over 4,000,000 barrels a day.

Cole Tells Roosevelt Everything Should Be Done to Find New Reserves

Congressman William P. Cole, Jr., of Maryland, appointed by President Roosevelt this summer to be a judge in the United States Customs Court at New York, resigned his seat in the House of Representatives October 26.

As chairman of the Oil Subcommittee of the House Interstate and Foreign Commerce Committee, Cole has been in close touch with the industry since 1935, when his group made an over-all investigation of conditions. The fair and unbiased reports which the subcommittee made as a result of its studies then and in later years earned for him the appreciation and confidence of all groups in the industry.

Congressman Cole was first elected to Congress in 1926, serving two years. He was not re-elected in 1928, but regained his seat in 1930 and has served continuously since March 4, 1931. During the last war, he was commissioned a lieutenant, saw service abroad and was promoted to captain; his son enlisted in the army in 1941.

Before relinquishing his seat in Congress, Cole made a personal report to President Roosevelt covering the activities of his oil subcommittee during his tenure as chairman, in which he urged the coordination of all oil control in the hands of one agency with a mandate to encourage the development of new reserves, to provide the necessary materials for development and, above all other things, "to set whatever prices may be necessary over the products to insure their production, processing and delivery in the needed quantities and types."

Relating the achievements of the oil group, Cole declared its best achievement came indirectly in the form of a wider acceptance of conservation principles and expressed the belief that "practical conservation of oil within the economic limits is now generally in ef-

fect throughout the United States and avoidable waste within the economic limits of the cost of production is so much the exception that instances of it appear as glaring examples."

Cole told the President there is a serious lack of understanding among both officials and the public as to the real situation with respect to supply, a misconception that the productive capacity of present producing facilities far exceeds the quantity of crude currently being consumed, and another mistaken idea that deficiencies in production capacity can be met by curtailing civilian consumption.

The last, he declared, is a "most dangerous error."

"It is extremely dangerous to rely on restricting civilian consumption to offset a petroleum shortage, without complete preparation for the utilization of the saved products by conversion to other war products," he warned.

Efforts of the OPC and WPB to encourage wildcatting have failed, he charged, through no fault of their officials but rather because the cost of finding and producing oil is greater than the price for which it sells.

Cole discussed the various proposals for subsidies for new oil which have been offered, but pointed out that no plan has been suggested which will provide the incentive needed for maintenance of stripper well and secondary-recovery operations and rehabilitation of abandoned wells, reaching the conclusion that higher prices constitute the only way in which such activities can be stimulated.

"It is as illogical to place a blanket price on oil below the cost of production, which will inevitably cause a deficiency in this product and may cause us to lose the war, as it would be to say that we will not pay a different price for tungsten, even though we cannot furnish our troops with arms without its use," he declared.

"Oil is more surely a war product, and a more important one than steel, guns, armament, or explosives, and we do not restrict their production by price.

"We are certainly headed toward disaster, Mr. President, if we cannot make provision at this time for an increased supply of near-by petroleum."

Throughout his report, Cole emphasized repeatedly that "this is an oil war."

"It is of paramount importance that we look at our drilling campaign now for our supplies of petroleum in the autumn of 1944," he said.

"I paint a somber picture, Mr. President, and I regret its necessity, but I would be recalcitrant of my duty did I not call it to your attention before leaving Washington."

Cole called for completion of the "big-inch" pipe line to its originally-planned seaboard terminous, to relieve the East, where supplies are steadily deteriorating, but warned of the need to protect the East Texas field against waste when demand for war oil increased and the temptation to draw increasing amounts from that area increases.

This could be accomplished by pumping water back into the sands to maintain pressure and, since legislation would require too much time, he suggested that the operation be undertaken at once by either the Army engineers or some other branch of the government. The same expedient should be resorted to in the Salem pool in Illinois, he said, and suggested also that the government undertake wildcatting operations in Alaska to determine the availability of oil in that area; if found, it would relieve the situation in California and, after the war, offer an attractive field to "restless spirits" discharged from military service and unwilling immediately to settle in ordinary pursuits.

Cole urged also that thought be given to oil shale and coal, asserting that it is "imperative that many many years before we have a collapse of our oil productivity, we have a substitute to take the place of natural petroleum."

"Knowing the situation in which we found ourselves relative to synthetic rubber," he commented, "it would appear wise to me that at the termination of the war the government should build and put into operation pilot plants for the production of oil from these two sources."

Cole's final recommendation was for continuance of the oil subcommittee due to expire at the end of this year. "It is obvious that more and more control of the industry must fall under federal direction, as our reserves, measured in years, grow less," he said. "It is proper and necessary that the legislative branch of the government should have an independent means of developing information for the enactment of wise laws relating to petroleum, which should be special and permanent in its character.

"It is impossible, in a few months or a few years, for the average legislator, who has not grown up in the business, to sufficiently familiarize himself with it to have the feel of it sufficiently to, with confidence, recommend legislation on it. It is therefore important that such a committee as this should have a continuing life over many years, and over many administrations, to properly advise Congress on petroleum matters.

"The post-war period is certain to disclose the petroleum industry's internal economy disrupted, its supplies used up, its finances limited, and its reserves depleted.

"Legislation to rehabilitates the industry will certainly be indicated. It is vital that these laws be initiated by legislators who have long studied this intricate industry."

O'Mahoney Committee Favors Centralized Oil Control and Drilling Stimulant

First definite steps to encourage exploration for new reserves, discussed at length earlier this month during hearings before the O'Mahoney subcommittee, were taken by the Senate Public Lands Committee October 21 when it ordered a favorable report on the O'Mahoney bill to reduce royalties for new oil on the public lands.

The bill provides that the royalty on new public lands oils shall not exceed 12½ percent for a period of 10 years, but makes no changes in the Interior Department's regulations for development or operation.

A report of the hearings was submitted to the committee by Chairman O'Mahoney of the subcommittee, for its consideration, but no recommendations were made for action on the many suggestions offered for encouragement of wildcatting.

The report, however, did recommend reforms in the handling of oil problems by the government agencies, specifically along the line of coordination, which, it was pointed out, would require no legislation.

"Lacking such complete coordination of effort," it was declared, "there should at least be an understanding between OPC and the War Production Board whereby adequate priorities could be guaranteed for the drilling of necessary wells and the construction of necessary pipe lines."

The subcommittee also urged that steps be taken by OPC, WPB and Reconstruction Finance Corporation to finance exploratory drilling "upon a

sound financial basis" under legislative authority already granted RFC.

It suggested that long-term loans for not less than five years be extended upon good oil land security, particularly to the independent wildcatter who is otherwise unable to finance a drilling program.

"It would appear from the testimony that banks for the most part are unwilling to make loans even on good property except for short terms," it was explained. "The nation's need for new oil reserves is so great that the operator who already has good oil property should be able to offer that property as security to RFC for a loan to be paid back over a sufficient term of years, provided the advance is to be used in the exploration for new fields.

"Moreover, this would constitute a much needed reform in the oil industry by affording the independent wildcatter an opportunity to hold his discoveries after he has made them. In the past, because of lack of adequate financing, the small discoverer has been compelled to sell his discoveries to the majors. This is probably the primary reason why the major companies have been constantly acquiring an increasing percentage of the nation's proven reserves."

The final recommendation was for utilization of every known process for the reduction of domestic iron ores for the production of more steel, from which adequate allocations could be made to the oil industry for necessary development.

O'Mahoney pointed out that of the five agencies most directly interested in oil, three—the ODT, WPB and OPA—are not responsible to the oil coordinator nor to one another. Ickes, he said, has performed the difficult task of organizing the oil industry in a most efficient and praiseworthy manner and "his achievement reflects great credit upon him personally and upon the industry," but this accomplishment has lacked its full effect because of the lack of coordination.

"The result is that the nation, which has already experienced a crisis in steel and in rubber, is now facing a similar crisis in oil," he declared.

The report pointed out that pipe lines and river barges planned to ease the Eastern transportation situation have not been built because WPB has been unable to release the required amount of steel, and for the same reason it has been necessary to bar the drilling of 13,000 wells urgently needed.

The subcommittee saw the problem last year when it began its studies, O'Mahoney said, and the hearings which have been held "demonstrate beyond any shadow of doubt that an immediate war need is the stimulation of the search for oil."

"The undisputed facts revealed by these hearings are that production of oil has been falling off, wildcatting, or the search for new fields, has nearly ceased, while the growing war demand may well deplete our known reserves, endanger the conservation policy, and in time force us to turn to oil shale and coal for petroleum substitutes," he asserted.

The report dealt extensively with the testimony on price given at the hearings, which showed, it said, that "the industry as a whole was against bonuses and subsidies and favored a flat price increase."

"Everywhere," O'Mahoney said, "the testimony was clear that costs had increased and that labor was scarce."

However, he explained, the issue is beyond the jurisdiction of the committee, although it is one that goes to the heart of the present economic crisis, but it is a matter of major government policy which he is confident will be reviewed by other Congressional committees with responsibilities in that field.

The committee pointed its criticism of lack of coordination by the situation with respect to the proposed trans-America pipe line from Tinsley, Mississippi, to the Seaboard.

"The ODT declined to permit the building of a 600-mile crude-oil pipe line to a known proven reserve of 80,000,000 to 100,000,000 barrels because the use of the required 50,000 tons of steel was not deemed advisable," it said. The OPC reports an erroneous reserve of 28,000,000 barrels, while the Navy Department desires the line to supply oil for East Coast storage, now empty. As a result, the independent producers (holding 95 percent of the reserve in Mississippi) rely on inadequate tank car rail movements to Southern Illinois refineries. Similarly, the Mississippi state oil and gas board found that lack of adequate shipping facilities was responsible for a 15 percent decrease in production in the summer of 1942."

☆

PRICES: Prices paid by Shell Oil Company prior to February 2, last, to its lessors in the Ventura Avenue, California, field have been legalized by the Office of Price Administration in an amendment to the petroleum price schedule.

OPA explained that the publicly posted prices for the field on October 1, 1941, the base period, were below the prices paid by Shell to its lessors for royalty oil. Some of the lessors had written contracts for the premium prices, and those prices became the ceiling for them, but for others who had no written contracts the posted price became the ceiling.

The administration's action, which is retroactive to February 2, will place all lessors on the same footing, and the Shell has agreed to absorb the difference in price, which amounts on the average to three cents per barrel.

☆

BIG-INCH: Construction of the big-inch pipe line from Longview, Texas, to Norris City, Illinois, passed the halfway mark last week, with every prospect that the project will be completed on schedule time, before the end of the year.

Completion of the project on schedule, however, will depend upon the prompt procurement of pumps, it was disclosed by Coordinator Ickes October 22, and it is not now anticipated that it will be possible to run oil through the line before sometime in January, at best.

By the middle of October, it was announced by OPC October 21, 289 miles of pipe had been welded and laid, and crossings of six rivers had been completed. The crossing of the Arkansas River was scheduled to be completed this week, and excavations and the welding and coating of pipe have been started on the Mississippi River crossing below Cape Girardeau, Missouri.

Virtually all material has been ordered for the terminals and pumping stations, and contracts for construction will be made soon, upon the acquisition of sites. Orders for 39 80,000-barrel second-hand steel storage tanks also have been placed and bids for cutting down and re-erecting them have been called for. The tanks will be secured from the Humble Pipe Line Company, Gulf Oil Corporation, Tide Water Associated Oil Company and Sinclair Prairie Marketing Company. Construction of power lines will be started in the near future, and acquisition of pump station sites will be pushed.

Welding of pipe for the Florida pipe line is getting under way, with 12 miles so far welded, the Coordinator said. Completion of the line is anticipated by December 15, but that date, it was stressed, is dependent upon procurement of the small amount of new materials which will have to be used. If construction is not finished on schedule, it will be because of failure to get

this equipment, due to the general tightness of the metals situation.

The Defense Plant Corporation is now engaged in converting a number of steel barges from dry cargo to oil service, and expects to shift about half of the original number of 259, the limiting factor being power equipment. About 130 barges will be converted, and first call on the supply will be given the oil service between the Jacksonville terminus of the Florida pipe line and northern destinations along the intracoastal waterway, with any not needed for that service going into service on the Ohio river.

☆

TAXES: Many new taxes will go into effect November 1, including a levy of three percent on all charges for the transportation of property by freight, express or otherwise and an increase from 4½ to 6 cents per gallon on lubricating oil, under the largest tax bill in the history of the nation.

The new measure, variously estimated as raising from six to ten billion dollars, and to be followed shortly by another bill to raise an additional six billions, will make effective greatly increased individual and corporation taxes on 1942 and establishes the Victory tax, effective January 1, next, of five percent on all individual income in excess of $624 a year.

Acting to relieve corporations, the Senate, in the final drafting of the bill, secured the reduction of the House proposed rates of surtax from 32 to 22 percent on net incomes between $25,000 and $50,000 and from 21 to 16 percent on larger incomes, to provide a combined normal and surtax rate of 40 percent as against the House's 45 percent.

The House rates of surtax on individual income were retained, but its proposal to cut the allowance for dependents from $400 to $300 was compromised at $350. The requirement that individual returns be sworn was eliminated in favor of certification of accuracy by the tax payer.

The bill provides that the net operating loss of any business for any taxable year beginning with 1942 may be carried back and credited against net income for each of the two preceding years, but not prior to 1941, and that portion of the loss for any year which is not used as a carry-back may be carried forward to the two succeeding years, as heretofore.

The new law freezes the social security old-age pension tax at one percent, each, on employer and employee for 1943, but provides for an increase to two percent for 1944 and 1945.

That part of the Victory tax applicable to salaries, wages and commissions is to be withheld by employers, who will be required to furnish employees with a statement of the amount so withheld at the end of each year or immediately upon termination of employment.

Provision is made for the return after the war of 25 percent but not exceeding $500 in the case of single persons or 40 percent but not exceeding $1000 for heads of families, of the total Victory tax paid, or, alternatively, deduction in the annual income return of the taxpayer, within the limits set, of payments on insurance premiums or on debts and investments in government bonds.

☆

COSTS: Looking ahead to the liquidation of the petroleum transportation pool around the end of the year, when it is figured its deficit will be wiped out, OPA on October 21 assured distributors and dealers in gasoline and fuel oil along the Eastern Seaboard that they will be protected against inventory losses if maximum prices in the area are changed.

However, it was said, no decision has yet been made with respect to action on ceiling prices in the near future.

OPA's announcement was designed to counteract trade reports that prices would be reduced when the transportation deficit was eliminated and that no provision would be made to take care of inventory losses of distributors and dealers resulting from such a reduction.

"If price reductions should be made when the OPA withdraws its connection from the pool, any inventory losses that are incurred will be recompensed in the same manner in which similar losses were handled at the time of the August 5 price reductions," Administrator Henderson promised.

Henderson explained that the reports had caused confusion in the industry and were hampering the government's effort to build up inventories of heating oils.

☆

TANK CARS: Tank-car deliveries to the East Coast, after a three-weeks' decline, again topped the 800,000-barrel mark during the week ended October 19, with daily deliveries of 838,163 barrels, it was announced October 22 by OPC.

Deliveries improved 71,753 barrels over the daily average of 766,410 barrels recorded in the preceding week, the lowest figure touched since July 18, and served to allay somewhat the concern of OPC officials whether the rail movement could again be restored to the high August-September level.

The decline in deliveries for the week ended October 10 was only 2514 barrels a day but it brought the drop from the peak of 856,710 barrels to nearly 90,000 barrels, it was pointed out.

"Although we are still hopeful that we may be able to maintain a daily average of 800,000 barrels through the winter, it is becoming increasingly evident that the assignment will be a most difficult one for the oil industry and the railroads," Davies said.

"A number of factors, including the necessity of diverting tank cars for essential military use as well as to other special services, are operating now to retard the movement of oil to the Atlantic Seaboard, and may be expected to continue to operate in that fashion. What the result will be when there is added the factor of winter weather no one can predict. I can only express the confidence of the OPC that the oil industry and the railroads will do the best job possible under the circumstances."

☆

DELIVERIES: Solid-train shipments now are bringing 800 cars of oil and products into the East Coast area, 600 of them to New England terminals and industries and the remainder to New York harbor terminals, it was announced October 20 by the OPC.

Twelve trains a day are moving into the area, ranging from 50 to 70 cars, it was said. One 60-car train of mixed products is moving from Sinclair Refining Company at Houston to Tramley Point, and two 70-car trains of mixed products are moving from Pan American Petroleum and Transport Company at Texas City and Gulf Refining Company at Port Arthur, to Carteret, New Jersey, and Gulf Port, Staten Island, respectively.

The New England movement consists of three 70-car trains of mixed fuel from The Texas Company at Port Arthur, two to Boston and one to Everett, Massachusetts; one 50-car train of industrial oil from Standard Oil Company (Indiana) at Whiting to Everett; a similar train of light fuel from Sinclair at East Chicago to Everett; one 70-car train of mixed fuel from Shell Oil Company at Houston to Boston; one 70-car train of mixed products from Pan American at Texas City to Portland, Maine; two trains of mixed products, totaling 125 cars, from Magnolia Petroleum Company at Beaumont to Providence, Rhode Island, and 25 cars of No. 6 oil from Gulf at Port Arthur to New England industries.

Alarming Downward Discovery Trend Must Be Reversed

By HAROLD L. ICKES, Petroleum Coordinator for War

ASSERTING that the nation must depend upon the independent operator for the lion's share of the wildcatting and for squeezing the last drop of oil out of the industry's older wells to reverse the alarming downward trend of new discoveries, the petroleum coordinator asks the independents to devote every effort to making the most of our known reserves and to stimulate the finding of new sources of supply.

The coordinator suggests an analysis of crude price structure . . . Pledges that OPC will do everything within its power to obtain necessary materials . . . . But warns prospects for materials in future even more dismal than for immediate future . . . . Hints of redistribution of industry-held equipment inventories and reclamation of idle materials . . . . Predicts further and continued drain on manpower.

The accompanying article constitutes the text of an address presented by wire at the Thirteenth Annual Meeting of the Independent Petroleum Association of America, Wichita, Kansas, October 21, 1942.

AS I talk to you this evening I have a very heavy sense of the worries which beset you in this anxious time. In a speech before a group of advertising men and others in Baltimore recently, I pointed out that it had been the objective of the Office of Petroleum Coordinator from its very beginning that no act of ours should change the competitive position of any individual or company in the oil industry. I mentioned also my repeatedly voiced belief that oil could best do its part in war if industry were kept healthy and robust. But truth compelled me to admit to those men in Baltimore, as I now do to you, that while it is still our policy that no act of ours shall change anyone's competitive position, it is no longer possible for us to prevent others from doing so. By others I mean those bubonic-plague-carrying rats of Germany and Japan. It was necessary for me to say then and to repeat now that while I still believe that the oil business can serve the requirements of victory best if it is kept healthy, we now know that inadvertantly the industry will have its casualties of war just as certainly as will the men who serve in combat.

I would feel a good deal happier in speaking to you this evening if I were not disturbed by realities such as these, but I would be really depressed if I did not know that you and we, your industry and your government, are organized as we are to struggle through these difficulties together. I venture to suggest that you on your part might well have even greater cause for feeling depressed were it not for just that arrangement.

Aware of Tribulations

We in Washington have been sharply aware that one of the major tribulations of the oil industry as of all industries has been the scarcity of materials. Moreover, we have not only been aware of it; we have tried to do something about it, although I am quite sure that many of you have doubted this on more than one occasion.

Just two weeks ago today I was called as a witness before the War Minerals Subcommittee of the United States Senate, and I devoted a considerable part of my testimony to a plea for more exploration so that we might reverse the alarming downward trend of new discoveries of oil. I suggested among other things that there might well be a review of the price structure. I have no conviction on the subject, but I have an open mind and I think that we ought to take a look at the facts. I assured the committee that my office was prepared to collaborate with the price administrator in an analysis of this problem. The Office of Petroleum Coordinator considers the encouragement of exploration to be so important that we are determined to do everything within our power to get you the materials that you need and get them for you in such a manner as to spare you just so far as we can the formalities and delay, or, as you probably would put it, the red tape which I know that you frequently find irksome. Of course, in the getting of this material it may be necessary to deny some other branch of the oil industry need, for we must remember that only a certain amount of material is available for the industry. The best that we can do is to try to see that the material goes for the best possible uses, and that means the uses which will contribute most to the winning of the war, a war which may well last for years.

Urgency of Discovery Need

I know that it must be discouraging to you men who know how urgently important it is that oil be discovered, produced, refined and transported to our war industries and our fighting forces, and who nevertheless fail in your efforts to get the materials necessary for such activities. I have personal reasons for understanding how you feel because I went through many months of discouragement before the War Production Board allocated steel for the first leg of the 24-inch pipe line which I had urged to built from Texas to New York. Yet much as I wanted to see this line started, and now completed, I have been aware of the solemn responsibility which the War Production Board had to shoulder in deciding between the conflicting claims for steel and equipment. I am sure that you would not like any more than would I to have to make the decision as to whether a strictly limited amount of material should go for guns, for planes, for tanks, for ships, for pipe lines, for derricks or for tubular goods. Moreover, the problems of the WPB become more

worrysome day by day as the demands of war increase and multiply. It is for this reason that you and all of us must be aware of reality regardless of how unpleasant it may be. We must recognize that there just isn't enough material to go around even for the most essential uses, and that we simply have to figure out ways of making the most of it. In fact, the War Production Board has already taken the position that the oil industry should utilize just so far as possible the inventories which it now has on hand before it can expect serious consideration of pleas for any substantial amounts of new material.

With this situation in mind, the Office of Petroleum Coordinator has been studying the possibilities that may lie in the redistribution of materials now held by oil operators, although as I speak nothing specific along this line has been agreed upon. It seems to me to be perfectly sound in principle that those operators with excesses of materials should be willing to make them available on a reasonable basis to those who are short of their requirements. Of course, I am familiar with the principal objection which is offered to this suggestion. It is that operators who are wise enough virgins to stock up against a possible rainy day should not lose the benefit of their forsightedness in being forced to share their stores with those who did not look ahead. However, without pausing to debate this point, I will simply call attention to a fundamental fact which supercedes all others: The oil industry must be kept operating regardless. It has to have materials to operate. It must get those materials from whatever source that can make them available. I have every confidence, therefore, that a plan for the redistribution of industry-held materials will be worked out within the very near future, and that there will be the fullest possible cooperation as called for by the needs of the times, both from the 'haves' and the 'have-nots.'

Another possibility that is occupying our production and materials divisions in the Office of Petroleum Coordinator is that of reclaiming material and equipment which is either idle or can be shifted to some employment which will contribute more to the needs of war than the use to which it is now being put. We are hopeful that the benefits flowing from such a program will be found to be quite substantial.

Situation Will Get Worse

Now in talking about materials, I do not mean to sight the other problems with which you men must cope, but when you get right down to fundamentals, are not materials the heart of a good share of those problems? If there were plenty of material for wildcatting, for drilling on proved reserves, for refining and for transporting, your businesses would run much more smoothly and satisfactorily and my job would be more enjoyable.

However, I think that anyone who will take the trouble to read the perfectly obvious handwriting on the wall will see that the prospects for next year from the materials point of view are even more dismal than they are for the immediate future. Even less will be available unless all signs fail. Even greater care will have to be taken in the selection of wells to be drilled.

Manpower

Of course, there is another problem just as acute as that of materials if not more so. I refer to the problem of manpower. I have done more than a little worrying over the difficulties which this has caused for you. I know that there has been a progressively serious exodus of trained men from all branches of the industry and that no branch has been hurt more than you producers. I know, as you do, that you can't train a driller in a few months, and that the training of men for seismic and geophysical work requires years. Since misery loves company, it may be some solace to you to know that I am having labor pains, severe ones, in the coal mines, too. You see I am also coordinator of hard fuels. If you have not already been aware of the manpower situation, we have tried to do something to help. As most of you know, the issuance of Occupational Bulletin No. 15 by the Selective Service System came as a result of conferences between General Hershey's staff and representatives of the Office of Petroleum Coordinator. I have nothing but praise for the understanding cooperative attitude taken by General Hershey and his aides in these discussions. They showed a full appreciation of the essentiality of the oil industry to the war and of the difficulty of training men for the multifold duties which have to be performed, especially in the producing fields and in the refineries. Occupational Bulletin No. 15 sets up some three score categories in the oil industry as to which local boards are justified in considering deferment. It is, perhaps, not all that you men would like to have but I believe that you will agree that it is substantially more than you had before.

Nevertheless, it will be nothing more than common prudence for you to prepare yourself against further and continuing drain upon your manpower. We cannot have an army of 7,500,000 men without drawing upon your industry and all others to get them. I don't like to have to make so unpleasant a forecast but I am unwilling to raise your hopes when there is no basis for it.

All that I can offer as comfort is my solemn promise that, subject always to the exigencies of war, the Office of Petroleum Coordinator will do everything that hard work and conscientious study and an abundant patience can make possible in the way of minimizing the impact of the war upon you. As I pointed out, we know of your materials and manpower problems and we are trying to do something about them.

We know what the rubber shortage has already done and what the forthcoming program of nation-wide rationing of the gasoline will do to your markets. We are cognizant of your increased labor cost and of the mounting burden of taxation. All of these things are objects of our continuing concern and you may be very certain that we shall never fail to act in any proper case whenever it is possible for us to do so within the scope of our jurisdiction and in view of a strained wartime economy.

Importance of Independents

Especially do I want you to know that I realize the importance of the independent producer, both in peace and in war. The very term independent seems somehow symbolic of the American birthright of free opportunity. In saying that I find no criticism of the so-called major companies which, with only an occasional exception, have given devoted and patriotic service to our war program, and have shown the finest kind of cooperation, and even when at times it has not been to their financial advantage. And yet I suspect that I shall always feel a warm affection for the little fellow and have a sympathetic interest in his problems. We must always have the independents, the little fellows, in all lines of endeavor in this country of ours. Without them something would go out of the bone and fibre of America.

If we have needed you before, if we shall need you tomorrow, we need you particularly today. Upon you we must depend for the lion's share of the wildcatting. To you we must look for the squeezing of the last possible drop of oil from our older wells through secondary recovery, now more essential than ever before. I ask you to devote every effort to making the most of our known reserves and to stimulate the finding of new ones.

For my part, I pledge you that your interests will always be protected scrupulously. You and we, your industry and your government, are facing troublesome but adventurous days together. No one can say how far we shall succeed, but let it never be said that we have not tried with everything that all of us can give.

Equipment and Supplies Will Continue Hard to Get

By G. W. ORTON*
Director of Materials, Office of Petroleum Coordinator for War

THE oil industry, both operators and suppliers, has manifested a very commendable spirit of cooperation during the past and also at the present. It is the sincere desire of those of us in Washington to discharge our own responsibilities in keeping with this spirit of confidence as manifested, and in keeping with the ultimate objective of all of us, namely, winning the war.

I am inclined to look upon the Materials Division regarding its position in the organization of the Office of Petroleum Coordinator for War, as the hub around which the materials requirements of the various operating divisions in the industry revolve. For example, when an application is received and when the Production, Natural Gas and Gasoline, Refining, Transportation or Marketing Division has approved the need for the materials or equipment in relation to the war effort, from the standpoint of operations, it is then the responsibility of the Materials Division, dealing with the War Production Board, to see that the flow of such materials proceeds in an uninterrupted fashion as long as such materials are available.

* * *

Material Requirements Large

The materials requirements of the oil industry assume enormous proportions. For example, on the basis of figures prepared covering oil operators' expenditures for materials and operating supplies during the year 1941, on a going concern basis and including "drilling" and an average amount of new plant construction, such expenditures were found to approximate 850 million dollars. Three hundred and fifty million dollars referred to production, 376 million dollars to refining operations, 36 million dollars to transportation and pipe-line operations, and 76 million dollars to marketing and distribution.

While these figures are approximations they do portray the enormous magnitude of the industry's requirements during a most recent 12-months period. In the case of production, natural gas and gasoline the largest requirements consisted of tubular goods, which amounted to approximately 192 million dollars; for refining, chemicals represented approximately 138 million dollars. Naturally, in the case of transportation, pipe represented the largest item and approximated 21 million dollars. For marketing, service station, bulk plant and distributing equipment, and materials and supplies represented the largest item—approximately 27 million dollars.

Notwithstanding the fact that we can all appreciate the necessity for curtailing considerable materials requirements during the present period, there is a limit to which reductions can be made without unduly impeding the prosecution of the war. Oil is a war material of the first order. It both greases and propels war machines and equipment, and the steady flow of petroleum products to the places where needed on the battle fronts and in industry, as well as for essential civilian purposes must be maintained without interruption.

Skilled Key Men

It stands to reason that if the Materials Division is to discharge these responsibilities it must have skilled personnel in its key positions. Accordingly, and with the assistance of oil operators and the supply industry who have contributed some of their best personnel, we have purchasing agents, oil-country supply representatives, plant inspectors and engineers reviewing the applications for materials and passing upon the essentiality of them to satisfy the operating purposes authorized. We also have practical oil operators like yourselves, who are able to consider your problems from the standpoint of actual field experience. Therefore, the industry should have the satisfaction of knowing that their requests are receiving the attention of people trained and of long standing in the oil industry.

Given the right kind of personnel and in sufficient numbers the proper functioning of the Materials Division becomes a matter of office procedure and routine. In the reorganization which we have passed through recently provisions have been made for a good liaison relationship with the various branches of the War Production Board, so that we may know that we are performing our work in keeping with its policies, rules and regulations. This obviously is essential in the best interest of the war, as well as the petroleum industry generally. Provisions have been made for an expediting service so that applications for projects, as well as PD-1A and P-98b applications might be handled to conclusion expeditiously after they leave the Materials Division itself. It should be explained here that priorities applications have had to clear from 5 to 10 or more agencies in the War Production Board after leaving OPB and before the ratings have been finally issued.

A processing group, corresponding to the production line method, has been established and while it only started functioning recently the results shown to date are most gratifying and, should nothing interrupt the trend of this progress, within a relatively short time PD-1A and P-98b applications should clear the Office of Petroleum Coordinator within 24 hours from the time they are received.

In the plan of new organization, facts and figures are to play a very important part. A commercial enterprise could not operate efficiently without access to complete statistical data, and now that we are passing into an era of allocations, it is even more essential than ever before that facts and figures are readily available covering both past requirements as well as future requirements of materials and equipment.

The Production Requirements Plan will continue through the fourth quarter of this year and the first quarter of next year, for manufacturers and fabricators of metals and metal products. It is probable that it may continue thereafter, perhaps in some modified form, for the same purposes. The principles of the plan are basically sound and, in view of the relative impossibility of scheduling hugh quantities of assembled or fabricated materials, it is necessary that some general overall plan be used for this purpose. Oil industry operators, however, will not be required to come under the plan since the War Production Board has agreed that no essential useful purpose would be served by them doing so.

Present indications are that the oil

*Before annual meeting of Independent Petroleum Association of America, Wichita, Kansas, October 20, 1942.

industry operators will operate under a system of allocations for their major tonnage materials requirements. Allocations constitute a direct approach to the problems at hand. For example, the principles underlying allocations are divided into three parts: first, the determination of the job to be accomplished, or in other words the products to be produced; second, the materials required to do the job; and third, the sources from which such materials can be obtained, that is, either from inventories or from outside or manufacturing sources, provided of course the job is sufficiently important to warrant the diversion of manufacturing facilities from war materials.

As most of you know, the construction section of the Refining Division, under Mr. Max B. Miller, has in fact been operating under a system of allocations since the spring of this year, for obtaining steel plate and a few other larger items of critical material required in the construction of war plants such as 100-octane and related facilities. This system has proved its merits and has been found far superior to the use of priorities alone, because, if you will remember, there was a time when a "preference rating" as far as steel plate was concerned amounted to nothing more than a hunting license.

As we progress further along the lines of allocations, circumstances will necessitate the formulation by the various divisions of the Office of Petroleum Coordinator, of an overall end product requirements program; that is, beginning with production; what volume of production will be required in certain areas?—with attention being given to grades of crude and connection with transportation facilities? What natural-gas and gasoline production will likewise be required to supply refineries to insure availability of essential petroleum products? The establishment of this program and its conversion into materials requirements to carry it out should remove many of the uncertainties now existing in Washington circles, as well as throughout the oil industry as to just what it should do and should not do in the best interests of the war.

Maintenance Materials

Since the allocations system does not lend itself to the handling of repair, maintenance and operating supplies items, as well as smaller equipment and fabricated items, it is necessary that some other procedure be utilized to insure the steady flow of these materials to users. As mentioned previously, the Production Requirements Plan and the suppliers Form PF-1X have been found basically sound as the mechanics whereby raw materials for making manufactured items can be scheduled to fabricators and suppliers. In the case of operators we have been assured that some preference rating order procedure similar to that now involved in the P-98b Order will continue after the first of the year. Assuming that manufacturing sources and supply sources are properly scheduled under the two plans and forms mentioned, then the P-98b procedure should prove satisfactory since the items should be readily available.

Based on a survey of inventories on June 30 and requirements for the fourth quarter of 1942, as compiled during last August, requirements of carbon steel for the fourth quarter were found to be approximately 641,000 tons. We were given an allocation by the War Production Board of 292,000 tons—45 percent. Alloy steel requirements were shown to be 38,500 tons and we received an allocation of 2500 tons—6 percent. Copper and copper-base alloys requirements were found to be approximately 5,400,000 pounds, but we received only 42 percent. These allocations include materials for war plants and pipe-line projects. The oil industry is not the only one forced to curtail. Each of the other 231 major industries have had their allotments reduced in proportion, including manufacturers of war implements.

Inventories will be drawn on very heavily to make up the deficit between requirements and allotments. For example, the oil industry's carbon steel inventories on June 30 represented 1,300,000 tons, alloy steel inventories 63,500 tons, copper and copper-base alloy inventories 10,300,000 pounds. Notwithstanding the quantities in inventories, an unbalanced condition is known to exist. This fact and the reduced quantities allotted will necessitate considerable curtailment in quantities of materials used, and the elimination completely of all nonessential uses and operations.

Allotments constitute in reality a bank account and the various priority applications when approved are actual commitments, or checks drawn against it. We are required to record the latter to see that the "bank account" is not overdrawn. If there are to be sufficient supplies of these materials for war purposes it stands to reason that, since there are not enough for all purposes, we must all exercise care and diligence to see that such supplies are conserved for essential uses only.

You, as users of these materials, in the final analysis, are in the best position to determine what is essential and what is nonessential. We in Washington cannot possibly be furnished with sufficient data surrounding these applications to insure 100 percent accuracy in the decisions which we are forced to make. On the other hand, if you confine your requests and your applications sent us to your essential requirements, after giving careful thought and study to conservation, to substitution, and to utilization of second-hand and reclaimed materials, we are all helping win the war by making present stock piles available for the manufacture of guns, planes, tanks, ships and munitions.

At the same time, after you have convinced yourselves that you actually need critical materials and that it is truly in the interest of the war effort to preserve the continuity of your operations, then it is your very obvious responsibility to place the facts before us fully and completely and in no uncertain terms. And if we should reject or deny your application, don't hesitate to come back at us and don't pull your punches when doing so. The fulfillment of the responsibilities of the Materials Division is dependent upon your taking such positive action where the circumstances justify.

Therefore, in looking into the future, I believe it might be said that we are attempting to organize ourselves properly so that we might operate efficiently; that we might substitute definite action and "yes" and "no" answers for such indecision as has existed in the past; that we will soon be well into an allocations procedure covering major items which will necessitate the establishment of materials and equipment requirements for advance periods; that fabricators and suppliers will continue to operate under the Production Requirements Plan or PD-1X procedure in perhaps a modified form; that oil industry operators will continue to use a general preference rating, similar to the P-98b even after the first of the year; that the Petroleum Branch of the War Production Board, namely, the Materials Division of the Office of Petroleum Coordinator for War and other commodity branches of the War Production Board will become more or less self-sustaining units and, as a result, a considerable portion of the red tape, delays and necessity for contacting numerous agencies in clearing materials applications will be largely eliminated, in comparison to what it is at the present time.

It may be safely assumed that the longer the war lasts the more scarce will materials become, requiring emphasis to be placed on selectivity of use, in other words, the use of these materials where and only where the most return will be obtained. A united front along these lines will hasten the success of our present common endeavor and will permit a quicker return to the independence of action for which we all are fighting.

Michigan Oil Exploration More Important in Wartime

By N. X. LYON

COMMERCIAL development of oil came as an indirect result of World War I in Michigan and it well may be that this state will achieve its first truly important spot in the industry as an upshot of the present conflict. In the tough game of supplying crude oil where it is needed most Michigan holds an ace in the form of geography. Trump support is not as good as might be wished for but in the opinion of many adequate.

The state never has produced more than 2 percent of the annual United States production and its reserves have ranged between .2 and .3 percent of the total the past five years. This unimpressive picture is considerably offset today by the location of the Michigan supply to war-strangled and war-hungry markets. In effect every available barrel of oil in the state can serve an emergency utility of 3 or 5 barrels—if the 3 or 5 from the fields of plenty cannot be transported.

With the exception of Illinois, none of the other oil states with flush production are geographically close to the East Coast. Besides the shorter haul either overland by tank car or pipe line, Michigan has virtually unmatched water transportation outlets. The state is bordered on all but its south boundary by Great Lakes water with marine terminals at numerous points on Lake Michigan and Lake Huron, not to mention Saginaw Bay which juts its ports to within 50 miles of the main area of oil production. In the early days of development tanker transportation represented the chief outlet for oil with 20,000 to 30,000 barrels per day shipped to Toledo, Ohio and Buffalo, New York, and Cleveland, Ohio, from a port at Bay City on the bay. Delivery south by water was largely discontinued in 1937 on the completion of an 8-inch pipe line from Mt. Pleasant to Toledo. However, loading marine terminal facilities are such that a considerable movement could be initiated on short notice.

Tankers have been used by both Bay Pipe Line Company and Simrall Pipe Line Company to move some oil this summer to Buffalo and Cleveland, load-

Typical combination rotary-cable tool rig used in Michigan. Rotary has largely replaced cable tools in the Basin district for drilling to 1500 to 1800 feet as the fastest and most economical method of penetrating the glacial drift and effectively protecting the Michigan Stray gas sand and the Marshall sand, the later being a producer of valuable chemical brines. Usual practice calls for cementing a string of 6- or 7-inch casing through the Marshall with the remainder of the hole drilled with cable tools. More than 50 percent of the 3500 to 4000-foot wells in the Basin continue to use cable tools below the Marshall casing point.

History Michigan's Leading Fields

FIELD	Discovery Year	County	Aver. Depth Wells	Horizon (Principal)	No. Zones Produced	Proven Acreage	Total Production to Jan. 1, 1942	Current Per Mo. Production	Status	Drilling
Porter	1933	Midland	3450	Dundee	1	4650	31,776,155	75,000	Pump	0
Mt. Pleasant	1928	Midland-Isabella	3550	Dundee	1	4400	21,520,366	30,000	Pump	0
Yost	1932	Midland	3425	Dundee	2	2000	6,516,117	29,000	Pump	0
New Salem	1938	Allegan	1650	Traverse	1	1050	2,954,613	30,712	Pump	0
Old Salem	1937	Allegan	1600	Traverse	1	2100	2,784,108	10,490	Pump	0
Diamond Springs	1938	Allegan	1480	Traverse	1	460	709,834	3,144	Pump	0
Overisel	1938	Allegan	1480	Traverse	1	1640	1,857,675	16,176	Pump	0
Adams	1937	Arenac	2050	Traverse					Pump	
			2950	Dundee					&	
			4200	Monroe	3	700	1,551,278	90,600	Flow	9
Clayton	1936	Arenac	2550	Dundee	*2	800	3,462,078	18,500	Pump	0
Kawkawlin	1938	Bay	2950	Dundee	3	†3000	226,756	40,850	Pump	7
Freeman	1938	Clare	3900	Dundee	*2	2750	11,257,808	73,250	Pump	0
Winterfield	1940	Clare	3790	Dundee					Flow-	
			5050	Sylvania	*4	900	1,109,722	110,350	pump	1
Beaverton	1934	Gladwin	3880	Dundee	1	300	627,999	1,900	Pump	0
Buckeye	1936	Gladwin	3660	Dundee	1	4800	17,796,199	40,750	Pump	0
Sherman	1936	Isabella	3600	Dundee	*2	860	3,890,198	13,500	Pump	0
Wise	1938	Isabella	3625	Dundee	*2	750	1,503,832	18,900	Pump	0
Walker	1938	Kent-Ottawa	1900	Traverse	*2	5000	8,331,194	60,376	Pump	1
Crystal	1935	Montcalm	3200	Dundee	*2	1900	7,148,319	6,695	Pump	0
Edmore	1933	Montcalm	3100	Traverse	2	100	419,415	1,447	Pump	0
Winfield	1936	Montcalm	3300	Monroe	1	50	40,212	969	Pump	0
Muskegon	1928	Muskegon	1700	Traverse	3	2800	6,686,209	2,166	Pump	0
Deerfield	1936	Monroe	2150	Trenton	1	250	236,933	5,890	Pump	1
West Branch	1933	Ogemaw	1750	Traverse						
			2800	Dundee	2	2650	4,556,559	29,536	Pump	0
Headquarters	1941	Roscommon	3450	Traverse	2	1200	314,770	213,746	Flow	4
Richfield	1941	Roscommon	4200	Richfield	1	300	1,577	8,733	Flow	1
Reed City	1940	Osceola-Lake	2900	Traverse						
			3600	Monroe	*4	4500	2,756,282	833,296	Flow	7
Birch Run	1934	Saginaw	1530	Berea	1	300	190,227	691	Pump	0
Saginaw	1925	Saginaw	2600	Traverse	3	1500	1,374,074	1,950	Pump	0
Akron	1936	Tuscola	3450	Monroe	2	200	91,803	3,029	Pump	1
Bangor	1939	Van Buren	1015	Traverse	1	230	192,616	7,706	Pump	2
Bloomingdale	1938	Van Buren	1250	Traverse	1	1250	5,415,979	24,059	Pump	1
Columbia	1938	Van Buren	1250	Traverse	1	1020	1,863,507	8,281	Pump	0
Mill Lake	1938	Van Buren	1200	Traverse	1	350	371,828	5,051	Pump	0
Muskrat Lake	1941	Van Buren	1285	Traverse	1	800	112,409	7,467	Pump	1
Dorr	1938	Allegan	1625	Traverse	1	260	264,131	1,388	Pump	0
Hopkins	1939	Allegan	1640	Traverse	1	120	107,536	931	Pump	0
West Hopkins	1941	Allegan	1570	Traverse	1	450	87,353	15,575	Pump	2
Leaton	1930	Isabella	3650	Dundee	1	900	2,882,896	10,258	Pump	0
Vernon	1930	Isabella	3750	Dundee	1	940	4,285,466	9,790	Pump	0
Evart	1942	Osceola	3700	Dundee	1	400	.....	7,074	Flow	6
Sauble	1942	Lake	2150	Traverse	1	200	.....	2,449	Pump	4

* Includes shallow dry-gas horizon. † Proven but not developed.

ing out at Bay City. The Bay City terminal is connected by pipe lines to the major producing districts in the basin.

There are several sizeable terminals with storage facilities on Lake Michigan from which oil shipments can be made from fields in that part of the state. The Muskegon terminal is not directly connected by pipe line to producing fields but it is close enough so that truck hauling from the field to terminal storage is feasible.

The demand and supply situation in Michigan offers some confusing aspects in that while the state exports from 15,000 to 20,000 barrels of crude oil daily it at the same time imports from 25,000 to 30,000 barrels daily. With transportation facilities at a premium it might be presumed that this cross-haul could be eliminated to a large degree. Toledo, Ohio, is the destination of the bulk of the oil shipped out of Michigan and Detroit (Flat Rock) is the destination of most of the incoming crude. This shuffle of crudes results in actual meeting of the two although they do not follow parallel routes the entire trip.

Several conditions prevail which would make this apparent transportation waste difficult to eliminate, such as purchase and sale contracts, contrasted values of crude oils and prevailing transportation facilities to the markets served. Moreover, it is something of a question whether a change would free any substantial amount of transportation service for other areas even if the apparent duplication could be eliminated.

Rumblings of discontent are aimed primarily at the out-state movement of crude oil. Refiners have voiced complaints to the Department of Conservation that refineries within the state are short of crude oil, indirectly the result of the growing delivery to Toledo. P. J. Hoffmaster, director of the department, has repeatedly told refiners that it is beyond his powers as supervisor of wells or administrator of the 1939 oil conservation act to direct the course of crude.

Produce Fuel Oil

The Michigan refining industry is dominantly a producer of fuel oils and straight-run gasolines and as such found its markets greatly increased this summer. This war-market accounts in part for the shortage of crude. The market for fuel oil products is virtually without a ceiling. Many formerly shut-down plants now are attempting to get in on the market and others would increase the throughput if they had the crude. Part of the shortages it has developed represent "paper" shortages although figures compiled by the state for the first seven months of the year reveal that the supply of crude has been consistently below the "working demand" by plants in the state.

Crude oil shipments out-state had fallen to a mere trickle of 2500 to 3000 barrels a day last winter and were not materially increased until April when under an OPC directive an effort was made to deliver 10,000 barrels daily to Bayway, New Jersey. That figure was not attained, but between 6000 and 8000 barrels was delivered daily into mid-July, mostly by tank car. Again under OPC authorization in early July crude delivery was stepped up to Toledo, Ohio, and reduced to Bayway to take advantage of transportation facilities.

In August Bayway shipments had been reduced to 3000 barrels per day and Toledo delivery stepped up to 16,000 barrels per day. The Toledo market is supplied by pipe line and facilities are available for about 30,000 barrels daily.

The out-state market for Michigan crude has been estimated between 30,000 and 50,000 barrels per day—a figure related primarily to the Toledo market. Generally speaking the market has no ceiling in relation to the East Coast and it is conceivable that if the state had the reserves, transportation facilities would be so adjusted that material aid could be given the East.

The Toledo call on Michigan crude has been strengthening monthly as Illinois production has fallen or has been diverted to the East. The fact that two of the biggest Toledo refining markets, The Pure Oil Company and Sun Oil Company, are firmly entrenched in the Michigan production picture, accounts in a large measure for the present initiative of these companies in exploratory work.

Refining Plants

The 18 independent refineries in the state operating on August 1 had a raw-charge capacity of 56,900 barrels per day with four plants with a capacity of 8500 barrels daily shut down. Nominations for August by these plants totaled 51,002 barrels daily and the actual June 15 to July 15 charging amounted to 49,179 barrels per day.

The cracked-gasoline capacity of the independent plants amounts to approximately 8000 barrels daily with seven of the plants having either cracking or reforming units in combination with straight-run fractionating. All of the shut-down plants are straight-run units. These figures are exclusive of Socony Vacuum Oil Company's refinery at Trenton, a 25,000-barrel plant with facilities for 10,000 barrels of charging stock for cracked gasoline. This plant is supplied with Oklahoma and Illinois crude by pipe line and with certain exceptions has not been a direct factor in

American steel producers and steel warehouses are mobilizing their sales personnel to help you do a 100% job of getting in the scrap

WE'VE called him Bob Martin for short. He may be a U·S·S salesman, or he may represent some other steel supplier. In any case, it's his job to help you get the steel you need for war production when you need it. Things being what they are, that's a tough assignment in itself.

But now Bob Martin and many of his fellow salesmen have another war job. They've been made scrap expediters, too! The grave need for more scrap to produce more steel calls for unprecedented action. That's why the Steel Industry has joined forces with the War Production Board to make a thorough, continuous canvass of scrap resources in the plants of steel consumers.

So don't be surprised if the next steel salesman who calls at your plant asks first how he can assist your scrap drive. His experience equips him to help you do the best possible salvage job. And he has been given special information by the WPB to make his efforts tie in closely with the Government's salvage program.

How a Steel Salesman Will Help to Expedite Your Scrap Drive.

On his new job as a scrap fieldman, in cooperation with the WPB, the steel salesman assigned to your plant will:

1. Call on a principal executive. Explain the WPB Dormant Scrap Drive objectives, and ask for your active and immediate cooperation.
2. Help, in doubtful cases, to identify dormant scrap, such as obsolete machinery, tools and equipment which are useless to war production because they are broken, worn out or not repairable.
3. Assist in facilitating the disposal of dormant scrap.

The need for scrap is URGENT! By December 31, 1942, an inventory of 7,000,000 tons must be made available to steel mills. Do *your* part by helping the steel salesman to do *his* part in this all-important drive.

HELP FOR YOUR SCRAP DRIVE

Inform your employees by showing the new sound slide film, "Let's Get in the Scrap." We'll be glad to lend you a print. Write to United States Steel Corporation, Room 1637, 436 Seventh Avenue, Pittsburgh, Pennsylvania.

USS

AMERICAN STEEL & WIRE COMPANY, *Cleveland, Chicago and New York* · CARNEGIE-ILLINOIS STEEL CORPORATION, *Pittsburgh and Chicago* · COLUMBIA STEEL COMPANY, *San Francisco* · NATIONAL TUBE COMPANY, *Pittsburgh* · TENNESSEE COAL, IRON & RAILROAD COMPANY, *Birmingham* · SCULLY STEEL PRODUCTS COMPANY, *Chicago, Warehouse Distributors*

UNITED STATES STEEL

the Michigan supply-and-demand problem. In 1939-40 the Socony plant took between 1500 and 3500 barrels of Michigan crude daily primarily to aid its own producing division in answering a crude marketing problem that developed here during that period.

The foregoing review leaves little question insofar as market and transportation advantages are concerned. The potent questions concerning Michigan may be summarized as follows:

"Can the state be expected to increase its production in any substantial degree?"

Prospects for More Production

For practical purposes Michigan can be divided into two general provinces, the Basin and the Southwest areas. Each area has lime production. The Basin has produced the largest number of fields and fields with a higher per-acre recovery. Structures are not only bigger but more uniform and advance geology has proven more profitable than in the Southwest area.

Geophysical work has not proven of any material value in either district, leaving subsurface interpretation from deep holes and core drilling the chief working data for the geologist. Core drilling to 1400 to 2000 feet for markers on the Marshall sand and Red beds has been of considerable value in the Basin for working out highs and traps on structures.

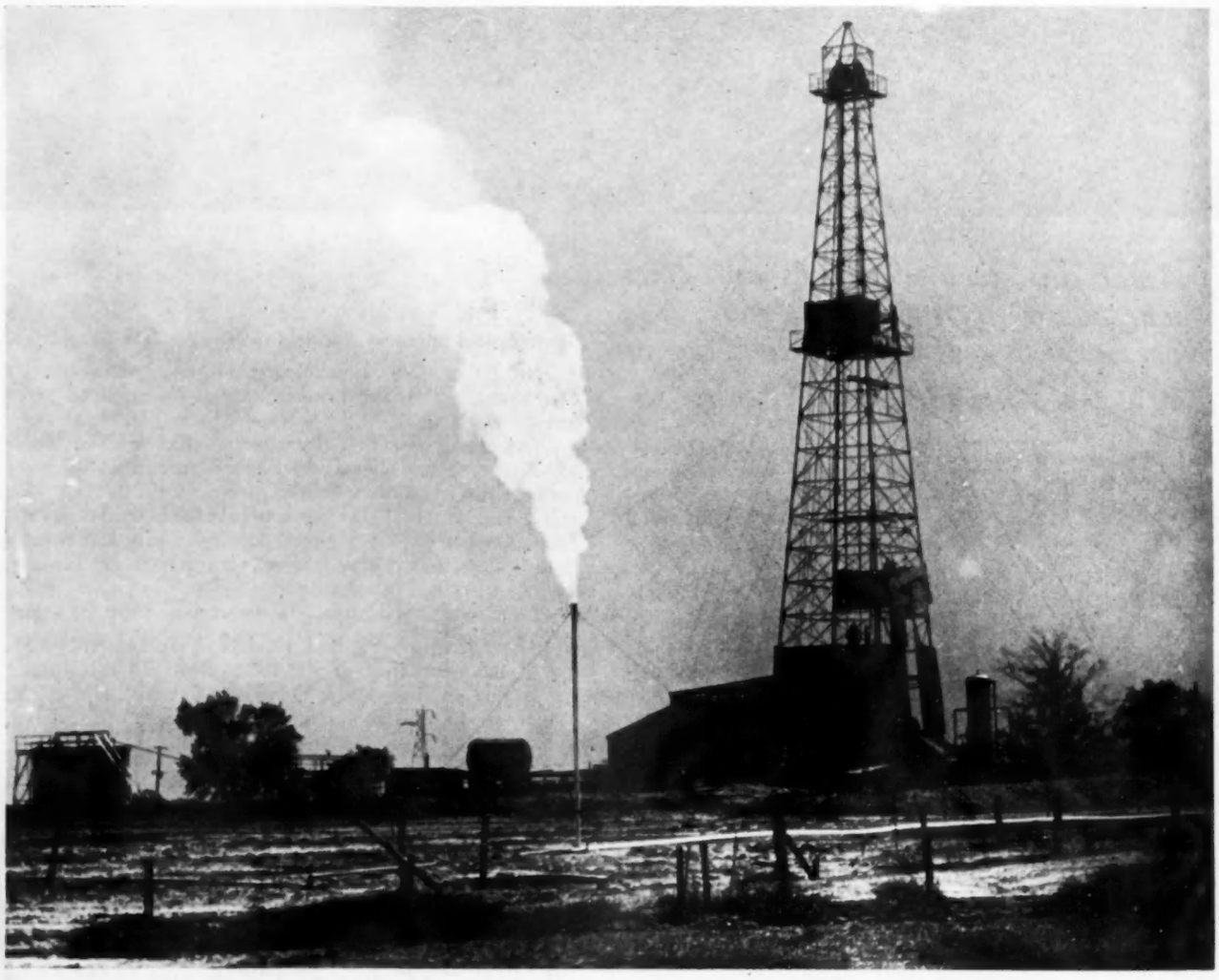
Southwest Michigan, where the Traverse lime is the chief producing horizon and is found between 1000 and 2000 feet, is characterized by coral reefs and extremely erratic trends and structures. It has frequently been referred to by the industry as a "slot machine" district where any wildcat well may strike a jackpot but where the application of cold geological theory runs into many a pitfall.

Highly profitable oil fields were developed in Southwest Michigan during

Michigan Drilling Results

YEAR	WILDCATS			ALL WELLS DRILLED			Added Reserves	Production
	Oil	Gas	Dry	Oil	Gas	Dry		
*1942	10	0	111	217	51	190	3,500,000	14,092,374
1941	11	8	216	441	97	413	37,402,000	16,358,717
1940	22	6	351	551	59	565	3,265,000	19,753,103
1939	14	2	361	845	56	578	18,200,000	23,462,095
1938	17	3	337	580	27	411	26,500,000	18,744,709

* First eight months.



Record depth well for Michigan, Gulf Refining Company's Bateson 1, Bay County drilled to 10,447 feet in 1941, was completed for a gas well in the Salina salt-dolomite section after plugback to 7850 feet. It produced about 3,500,000 feet of gas and 60 barrels of distillate per day initially but has not been produced commercially other than for distillate stripped while making tests on the gas. Failing to show oil saturation in the Niagara at 8270 feet, Trenton at 9400 feet (both lime) or St. Peter sand at 10,361 feet, the deep well appears to have discouraged any immediate prospects in these horizons. Most deep work is being concentrated on the Monroe and Sylvania, 1300 feet below the top of Dundee lime.

UNIT PUMPERS

National Unit Pumpers were designed to do a specific job by engineers of practical and diversified experience in the oil fields...They are built under strict technical supervision from the highest grade of materials by men skilled in their crafts.

From the drafting board to the testing laboratory no effort is spared to make them capable of rendering long, efficient and economical performance.

Irrespective of size or type, you are entitled to expect the fullest measure of service from your National Unit Pumper. If you are not getting it, call the nearest National store or office for an equipment check-up by our field engineering staff. You will also find them most helpful in the solution of your pumping problems.

In designing National Unit Pumpers our engineers have endeavored to incorporate every mechanical refinement to minimize operating care and maintenance...Although they have accomplished this to an extensive degree, regular attention is conducive to longer life and continued efficient service.

We Recommend the Following Maintenance Schedule:

- CHANGE OIL each fall and spring or more often if atmospheric or operating conditions cause sweating of case walls and contamination and sludging of oil.
- USE PROPER OIL as specified on name plate. This should be a high grade, well refined petroleum oil of recommended viscosity and cold test. It must be non-corrosive to gears, roller bearings and bronze parts, containing no abrasive matter, and have good defoaming properties.
- CHECK GREASE FITTINGS at least once a week, adding lubricant when necessary. If the lubricating is properly done, these frequent inspections are only precautionary, and actual additions of lubricant will be necessary only at long intervals. Add grease carefully in order that the small relief valve may function when reservoir is filled. Oil seals should be checked for possible damage from too rapid filling with high pressure guns.
- USE PROPER ROLLER BEARING LUBRICANT. A fluid lubricant such as transmission oil is recommended for walking beam and wrist pin bearings—particularly the needle types. Avoid low grade, heavy cup greases which may cake and lock the rollers.
- CHECK ALL BOLTS FOR TIGHTNESS AT REGULAR INTERVALS.
- KEEP THE PUMPER CLEAN AND REPAINT WHEN NECESSARY.
- USE SHORTEST STROKE possible consistent with reasonable speed and well requirements, as this will reduce the gear load.
- USE PROPER PUMPING SPEED to avoid pounding fluid which imposes excessive loads on all equipment.
- ADJUST COUNTERWEIGHTS to meet changing well conditions. This will reduce the pumper load and save power. Most National units are equipped with crank counterweights, permitting easy and accurate adjustment. *WHY NOT MAKE USE OF THIS FEATURE?*

THE NATIONAL SUPPLY COMPANY

Executive Offices: Pittsburgh, Penna. • General Sales Office: Toledo, Ohio • Division Offices: Fort Worth, Texas; Tulsa, Okla.; Torrance, Calif. EXPORT: The National Supply Corporation, 30 Rockefeller Plaza, New York, N. Y., U. S. A.; River Plate House, 12 South Place, London, E. C. 2, *Limited Liability*.

Rotary rigs have increased in Michigan during the past two years and now are generally used for all-way or part hole operations. Completions to 3600 feet with rotary have averaged from 15 to 19 days against 25 to 30 days for combination rigs. The above type of portable rotary rig has gained in favor.

1938, 1939 and 1940, but since that time, despite a high rate of wildcatting, results have been indifferent. Incidentally most of the strikes during the three years were the result of wildcats drilled on "hunches, etc.," while "smart" located tests the past two years produced only headaches.

The development of two important oil fields in the Basin during 1941, Reed City and Headquarters, resulted in stepped-up attention in this district with a corresponding decline in wildcatting in the southwestern part of the state.

New fields found in Michigan this year have not proven up reserves equal to those developed last year, and, unless the final quarter brings major reserve findings Michigan will show a drop in total proven reserves. The outstanding development has come from deep drilling work to the Richfield-Sylvania series rather than the uncovering of new pools in the Dundee and Traverse.

The Richfield - Sylvania development has been in a zone running roughly 1300 feet below the top of the Dundee lime. Besides promising shows logged on scattered wells, fields have been developed in this new deeper zone in Winterfield and Franklin townships of Clare County, Roscommon and Richfield townships of Roscommon County, Norwich township of Missaukee County, and Adams township of Arenac County. In all but one of these areas, Richfield, the deeper production has been developed following commercial exploration of shallower horizons in either the Traverse, Dundee or Monroe.

It should be noted, however, that the Richfield-Sylvania horizon, an intermediate section of the Monroe, has not produced either large wells or fields. Some wells have produced up to 200 barrels per day initially but the average has been below 100 barrels. The Richfield is a fairly uniform horizon dominated by lime and dolomite but in the wells so far drilled it has been without adequate porosity for large wells. Much of the development now being undertaken to the Richfield is with the hope that areas with more favorable porosity conditions will be found.

Potentially the Richfield horizon holds great prospects as the zone covers the entire basin province in a comparatively uniform layer. Discoveries so far suggest other discoveries on many of the older developed structures.

"Sylvania" has been a magic word in Michigan for years as the true Sylvania is a sand formation. This year's development of the Richfield-Sylvania, however, has not been in a sand horizon. Sand has been present in samples but production has had its source from the lime and dolomite. It is possible that some areas of the state will show greater sections of sand in the Sylvania series where production will be developed.

The Richfield-Sylvania, which comes in from 3600 to 5100 feet in the Basin area appears to represent the practical working maximum at this time for development. It is followed by thick salt sections that project the next potential oil formation, the Niagara and Trenton limes, at depths of 8,000 to 10,000 feet.

Gulf Refining Company's Bateson 1, S½ SE SE 2-14n-4e, Bay County, record - depth well in Michigan, logged Monroe lime at 3079 feet, salt section at 5480 feet with the salt section carrying through to 8270 feet, top of the Niagaran. This interval is generally regarded as too great to favor extensive test operations below the top of the salt.

On the other hand, at comparatively little additional expense by carrying a larger hole to the top of the Dundee, later deepening operations to the Richfield, about 1300 feet, are feasible.

It also follows that about 2500 feet stands as the maximum practical drilling depth in Southwestern Michigan at this time. Small gas wells have been found in the Grand Rapids field in the Monroe lime between 2300 and 2400 feet. Deep wells "on structure" in the Grand Rapids field and in Barry County, drilled to the St. Peter sand, about 5200 feet, carried no important showings of oil below the Traverse.

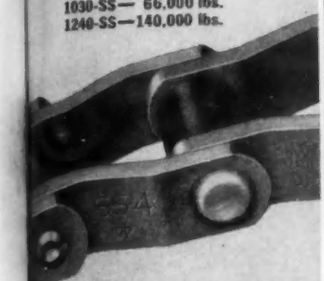
Michigan's possibilities for new fields, new reserves and greater production continue to be cataloged in the sphere of Traverse and Dundee fields with the deeper development complementary to the other. There still are wide gaps in the extreme center part of the Basin which have not been fully explored and districts covering thousands of acres farther to the north and south are virtually unexplored. The trend this year, as emphasized by core-drilling operations, has been farther north.

Returns in the Basin can be expected to average between 4000 and 6000 barrels per acre, average, recovery for the best fields. These recoveries are against an average cost of drilling ranging from $18,000 to $25,000 per well. The better fields can be expected to produce over an area of about 2500 acres and in some cases have run up to 3800 acres.

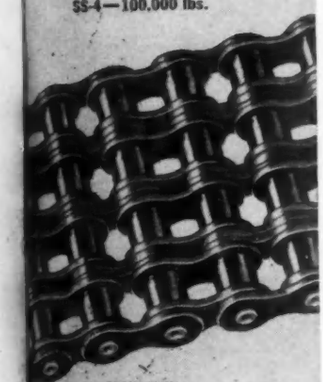
Rotary drilling now has replaced cable-tool operations to a large degree. In two years the number of rotary rigs in the state has grown from 5 to 29, exclusive of portable slim-hole coring rigs. Combination rigs, using rotary to 1500 to 1700 feet and cable tools to the producing horizon, 3600 to 4000 feet, are

BALDWIN MASTER
1244-SS—185,000 lbs.

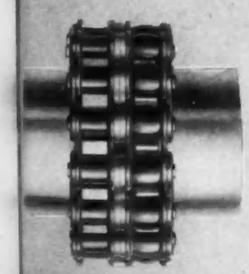
BALDWIN
SUPER SERVICE
1030-SS— 66,000 lbs.
1240-SS—140,000 lbs.



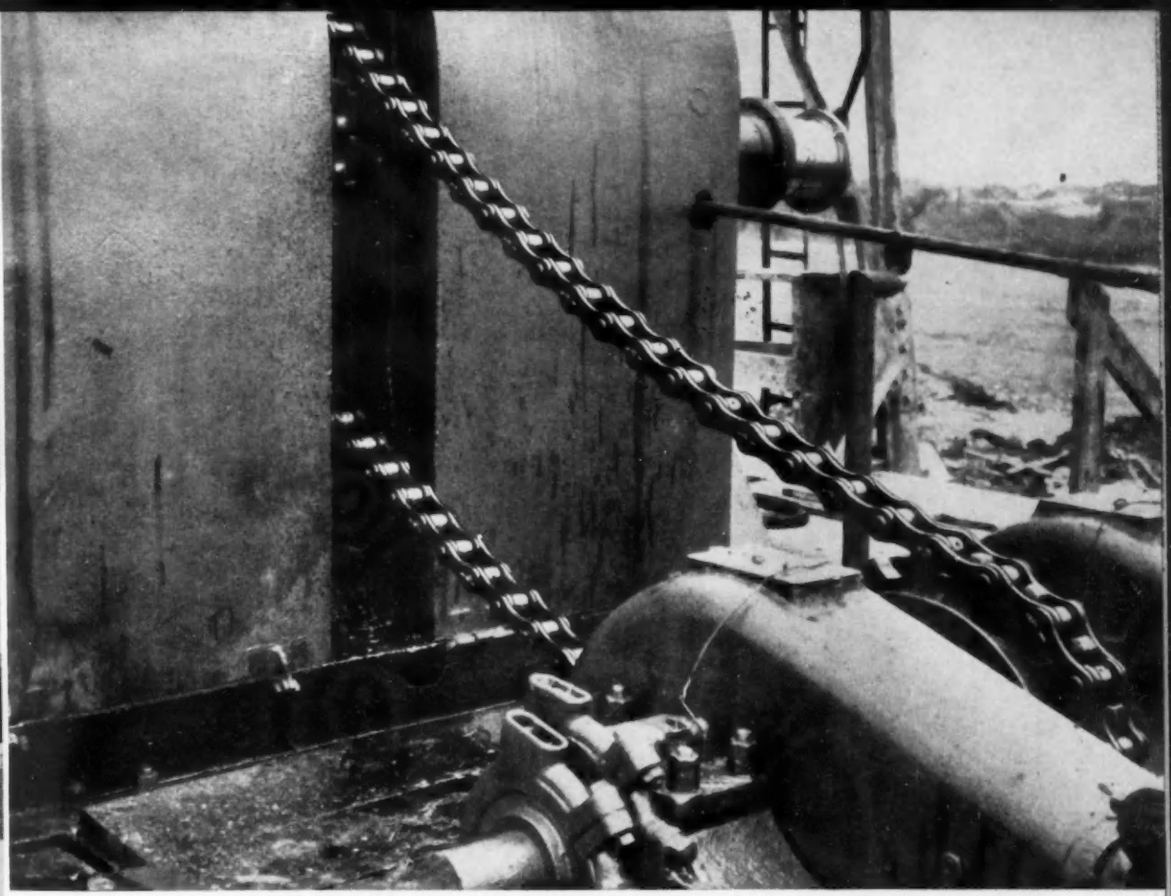
BALDWIN FULL FLEX
SS-3— 43,000 lbs.
SS-4—100,000 lbs.



BALDWIN
MULTIPLE ROLLER CHAINS
FOR DRIVES UP TO 500 H.P.



BALDWIN ROLLER CHAIN
FLEXIBLE COUPLINGS



Here's Something

TO PUT YOUR (SPROCKET) TEETH INTO!

● Yes, here's real food for thought if you're interested in getting *all* the power *all* the time. For Baldwin oil field chains give just that. That's why they're such favorites in the deepest fields and on the toughest jobs.

What are the reasons for their quiet, smooth running, predictable performance . . . their hardihood and lasting efficiency? Their design, material and construction! Want proof? *Try* them!

Among experienced drillers, Baldwin chains have earned an unrivaled reputation for cost-cutting performance. Why not let them lower the cost of foot per hole on your wells? There's a size and type for every depth and variety requirement of your drilling.

For Sale in All Oil Fields

BALDWIN-DUCKWORTH
Division of Chain Belt Company
341 Plainfield Street, Springfield, Mass.
Factories at Springfield and Worcester, Mass.

BALDWIN CHAINS TRANSMIT ALL THE POWER

With the Traverse lime pay horizon found between 900 and 2000 feet in Southwestern Michigan, many operators have not been concerned over equipment troubles brought on by the war. "Home-made" drilling rigs such as this one have been used regularly in the shallow fields.

preferred by many operators, especially where shallow gas formations over-lay the oil horizons.

Southwest Michigan is in a position to draw increased activity because of the depth and cost advantages over the Basin. Wells can be drilled and equipped at an average cost of $10,000 or less and require only 25 to 50 percent of the pipe needed for a Basin producer. The better shallow fields have averaged from 2500 to 3500 barrels per acre which is not out of line in view of the development costs.

The State Oil Advisory Board in September recommended to OPC that wells up to 2000 feet in six counties of Southwestern Michigan be exempted from M-68 to permit 20-acre unit drilling "on a pattern that can be later drilled for 10-acre units." The board's action was taken with the hope that development would be increased.

The amount of state-owned land under lease is fairly indicative of leasing activity and it is important to note that the state now has approximately 450,000 acres of its lands under lease for an all-time high. An estimated 2,000,000 acres are under lease in the state at the present time, including privately-owned and state-owned lands.

With the best pools having an average original reserve of between 15 and 25 million barrels of oil, any significant increase in Michigan's average rate of production seems to hinge largely on the developing of a number of fields within a shorter period than in the past. So-called major fields in the state have been found almost without exception in a two-year cycle. With increased exploratory work and with the backlog of geological data continually building up, the chances for a faster rate of discovery should be improved.

Satisfactory Regulation

Thanks to a sound conservation law adopted in 1939, Michigan no longer is suffering from alternate booms and slumps in oil production. At present Michigan is producing about 43,000 barrels of oil per day from prorated fields and 22,500 barrels per day from settled old fields. An example in point of the firmness of the state oil administration not to "gut" fields even for emergency purposes came this summer. The administration refused to raise allowables in the Reed City field, chief source of flush production, to meet a higher OPC quota in order to increase crude deliveries to Eastern markets. The administration won its point with federal authorities that it could best serve the nation by maintaining a somewhat smaller delivery to the East for several months than run the chance of not being in a position to aid in any manner after 60 days of supplying a greater amount.

The practical oil control law and its efficient administration has been instrumental in attracting more oil companies into Michigan this year. Allowables are fixed on a flat field basis without regard to potentials. All fields are prorated under exactly the same fashion with adjustments made only to acreage factors. In comparison to many states the allowables are comparatively high. For the greater part of this year 20-acre unit wells have been prorated to a flat 150 barrels per day per well with 40-acre unit wells allowed a factor of ¾ x 1 or 262½ barrels per day.

There are no complicated formulas involved. The allowables are designed to prevent waste. Regular surveys are maintained by the state to check gas/oil ratios, bottom-hole and reservoir pressure changes and water conditions. A higher allowable approved for Reed City last spring was cancelled and lowered when a survey showed too rapid decline in reservoir pressure.

Considerable data have been accumulated to indicate if not prove that the type of proration used in Michigan will conserve enough reservoir energy to flow between 60 and 75 percent of the expected total yield from a given pool. There are no conclusive data to establish whether ultimate yield will be altered by a faster or slower rate of withdrawal. However, faster withdrawal apparently will reduce the percentage of the total that can be produced by flowing. These conclusions are primarily based on observation of proration in Basin fields. There is considerable conflict in observation and opinions as to the affect of proration on the Traverse lime fields in Southwestern Michigan. Some of the worst handled fields from the standpoint of conservation compare favorably in per-acre recovery with the better operated fields.

Proration as a whole has been welcomed by Michigan producers with the industry by and large satisfied with the administration of the control law.

With a top of about 30 million barrels for the initial reserve in the best fields it is mostly wishful thinking to hope that new fields that will be discovered will do any better so far as the Traverse and Dundee horizons are concerned. The answer to building reserves and increasing the amount of daily production seems to fall in the discovery of more pools for a given period than in the past and development of deeper horizons in these fields to raise the overall recovery per acre. Secondary-recovery operations, while conducted on only a small scale, so far in Michigan have not proven of any material value either from the standpoint of greater recovery or economics. In a few isolated cases gas injection may have conserved gas for lease operating purposes.

2-CYCLE DOUBLES NUMBER OF POWER STROKES

Every Down Stroke a Power Stroke

The 2-cycle engine was developed to eliminate what was known as the "waste" stroke in 4-cycle operation. In the 2-cycle engine, instead of only half of the piston's down-strokes being power strokes, every down-stroke is a power stroke!

In the perfected CLARK Super-2-Cycle Engine this has resulted in power output also being actually doubled, as compared with the 4-cycle engine of equivalent size and displacement.

In addition to doubled power, the 2-cycle principle as perfected in CLARK "Angle" Compressors, offers these basic advantages:

1. GREATER SIMPLICITY — No intake or exhaust valves.
2. GREATER FUEL ECONOMY—due to Clark patented Fuel Injection.
3. LESS WEAR—as the power is produced with half the number of power cylinders.
4. SMOOTHER OPERATION.
5. FEWER MAN HOURS — due to simple design, few parts, and ease of servicing vertical cylinders.
6. LOWER OIL CONSUMPTION.
7. LOWER INSTALLATION COST—due to shipment assembled, small foundations, small buildings.

These points, explaining the leadership of the CLARK "Angle", merit your thorough investigation. Our engineers are at your service.

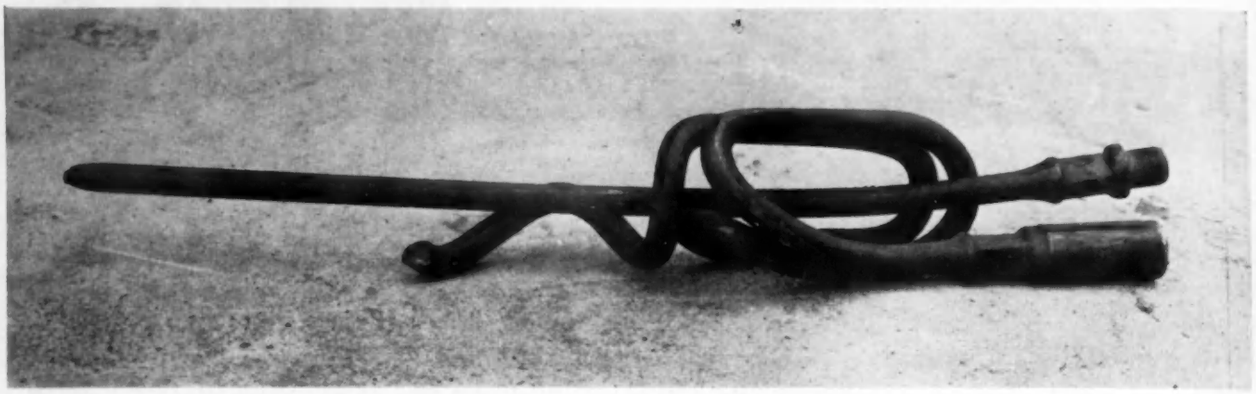
CLARK BROS. CO., INC. . . . . .OLEAN, NEW YORK, U. S. A.

Export Offices: 30 Rockefeller Plaza, New York. Domestic Sales Offices and Warehouses: Tulsa, Okla.; Houston, Texas; Chicago, Ill. (122 S. Michigan Ave.); Boston, Mass. (131 Clarendon St.); Huntington Park, Calif. (5715 Bicket St.) Foreign Offices: 72 Turnmill St., E. C. 1, London; Avda Roque Saenz Pena 832, Buenos Aires.

Affiliated Companies: Dresser Mfg. Co., Bradford Pa.; Pacific Pump Works, Huntington Park, Calif.; Bryant Heater Co., Cleveland, Ohio.

CLARK 6-Cylinder 600 H.P. "Super-2-Cycle" Angle Compressor

CLARK *Super-2-Cycle*



What Happens When Sucker Rod Breaks

WHAT happens when a sucker rod breaks and the pumping unit keeps on running? Since most of the results occur far down the hole, it is usually possible only to theorize, and to attempt to avoid a recurrence of the conditions behind the break.

One such break occurred in an Illinois well operating a 2½-inch pump with a ⅞-inch sucker-rod string at a total depth of 2900 feet. Normal operation called for 24 strokes per minute, but the exact speed at the time of break was not known, owing to the absence of the pumper.

The rod first broke 700 feet down the hole, leaving that comparatively short section still attached to the beam through the polish rod. The separated lower section evidently came to rest, against the tubing, at intervals down to the pump.

The 700-foot section, reciprocating rapidly as the engine ran away after release of its normal working load, soon broke the polish rod. This 700-foot section then fell down the well, the lower end dropping clear for 2200 feet before striking the top of the pump at the end of the fall.

So severe was the impact that the lower end of the rod, just above the coupling at which the initial break had occurred, was doubled completely over, a loop formed just beyond the doubling, and a half turn and beginning of a second loop formed before the velocity of the fall was checked and the remainder of the string halted. The final kinking of the rod produced a sharp reverse bend at which the rod snapped, leaving most of the 700-foot section free to be fished out as soon as it could be contacted.

Connection was then made with the top of the 2200-foot section standing in the hole, and still attached to the pump despite the tremendous jarring it must have sustained under the impact of the free section. The weight indicator on the pulling unit had passed the 65,000-pound mark when the rod string parted, at a point some 33 inches above point of attachment to the pump. This freed section was then pulled from the hole, and slips threaded over the short stub of rod still standing up from the pump.

This section withstood a pull considerably in excess of the 65,000-pound limit at which the string broke, finally pulling the pump free and dragging it, with the looped and twisted end of the dropped section of sucker rod, to the surface. At the top of the 2900-foot travel of the last fish, the pulling machine still registered a load of 35,000 pounds.

So tightly had the ⅞-inch sucker rod wedged in the 4½-inch casing of the well that the outer or contacting surface of the rod was worn away for a quarter of its diameter by the drag against the casing on its passage up the well. Contact was made at the beginning of the first reversal, along the two outer surfaces of the reversed bight, and all along the downward tending first section of the snarled rod.

Looking more like a wire puzzle than a section of ⅞-inch sucker rod, the strange fish at top was pulled through 4½-inch casing for 2900 feet after the string parted at 700 feet, the polish rod snapped, and the top section brought up against the pump after a free fall of 2200 feet. The fish is as pulled from the well, through slips attached to tapered straight section lying within the reversed loop.

Examination of the kinked break showed no sign of crystallization or other change in the original grain structure of the steel, while the coning and greatly reduced cross-section of the rod at the end of the 33-inch piece left standing in the pump testify to the high tensile quality of the steel at that point. The four 180-degree turns made in the end of the rod by impact, all within the area enclosed by a 4½-inch circle, together with the 270-degree coil thrown into the rod, all testify further to the ductility and high quality of the steel.

In the absence of further corroborating data, the fact that the freed portion of the 700-foot section pulled easily out of the hole, and from a study of the two surfaces at the fracture, which occurred nearly parallel to the normal working plane of the rod, it is believed that the larger portion of the rod *pulled* free from the jammed portion on the rebound, subjecting the short kink at the point of breakage to a complete reversal of stress and resulting in its rupture.

The break and subsequently recovered fish provide an interesting basis for further speculation regarding sucker-rod performance under conditions other than those encountered in the normal working cycle.

How a little pump is doing its part!

There are many ways oil producers can save steel. And one of the most practical is by adopting a long range material conservation program.*

When this country's 200,000 stripper wells went on the beam several years ago, small bore metal-to-metal precision pumps were not available. Consequently, to compensate for progressive loss of operating efficiency, pumps of extra size and weight were specified. Now that production has materially declined, the continued use of these old oversize and overweight pumps is putting an unwarranted strain on old, worn pumping units and surface equipment, which will necessitate their replacement much sooner than would be the case if small, efficient pumps were used. And this surface equipment involves a far greater quantity of steel than the pumps themselves.

Help your country and actually save money by junking old, complicated, inefficient pumps and running "Petrol A" Pumps in low production wells for peak pumping efficiency.

Simplification of the design and reduction in the number of parts of "Petrol A" Pumps reduces the weight 75% in comparison with other pumps for stripper wells. This means that the steel in an old, heavy, complicated pump is sufficient to make four new "Petrol A" Pumps, or to make one new "Petrol A" and provide three times its weight for defense.

"Petrol A" rod type pumps can be anchored to old liner barrels without pulling tubing and can be made to run in 1½" insert tubing. Made in top and bottom lock types. See our nearest distributor or send for field representative. Save first and last cost—save steel for defense.

CONSERVATION TIPS

1. **Save steel by keeping surface equipment running longer!** Small bore precision metal-to-metal pumps reduce the load.
2. **Buy the pump with the least steel in it!** Steel saved here builds tanks, guns, ships and planes.
3. **Reduce power consumption with the right sized pump!** Power is as vital to the war effort as material.

FLUID PACKED PUMP CO.

MAIN PLANT: LOS NIETOS, CALIF.

HUNT BUILDING, TULSA, OKLAHOMA; 6006 NAVIGATION BOULEVARD, HOUSTON, TEXAS; TEXAS BANK BUILDING, DALLAS, TEXAS; NATIONAL SUPPLY COMPANY STORES, ILLINOIS FIELDS

*Flupaco "Improved Inserts," "Volume Producers" and "Producers" contain much less steel than other pumps of equivalent capacity. In fields where metal-to-metal pumps are not necessary, "Flu-Ring" and "Flu-Cup" pumps with combination plungers offer another way for the extensive conservation of steel.

WORLD'S LARGEST EXCLUSIVE OIL WELL PUMP MANUFACTURER

Trailer House Makes DeLuxe Inexpensive Portable Doghouse

THE useful doghouse at a drilling well can be made into a pleasant room where workers may keep their belongings in order and change from overalls to street clothes in comfort. At comparatively small cost the usual dreary doghouse, where nails are the only facilities for hanging clothes and dinner pails, or for making out drilling progress reports, can be replaced with one that will be the pride and joy of the crew.

A large oil company is using a house car or trailer house for a doghouse, and thus obtains easy portability along with numerous conveniences. It contains a combination unit at the front end which can be used as a heater in the winter and a fan when the weather is hot and sultry. A gas burner contained in a well-designed shell is fired up to heat the interior, with an electric fan bringing in the heated air without fumes. In the summer, the stove disconnected, the fan circulates cool outside air.

This house car was obtained from the builder with no interior equipment except the ceiling and wall covering. At the company shops, lockers were built and placed alongside one wall with dividing panels between each one. Shelves were placed above the clothes hanger rail as a receptacle for lunch pails and extra skull guards. Below the clothing hangers is a place for boots and shoes which are kept in the locker without cluttering up benches and desk room. A wide comfortable bench across the back of the room enables the driller and tool pusher to sit in comfort while they discuss the difficulties and problems of the day.

Above the window at the end is a large cupboard where blank forms are kept, while just inside the door is a convenient desk and chair. Nearby is the company phone connected to lines as soon as the house is spotted on location. Wired for lights, the attaching cables are plugged into receptacles at the well so that illumination can be had and power for the air-circulating fan obtained. As a finishing touch, the exterior is painted company colors in shiny enamel which some one of the crew keeps polished.

Locker space for each man, and seat for convenience.

Locker above window for blank drilling forms, and telephone.

Stretching a Lathe

By ELTON STERRETT, Staff Writer

SWAMPING of many oil-field machine shops with war work, shifting of considerable shop equipment to war-effort plants to round out their machine-tool programs, and practical withdrawal of the railroad shop as a possible aid in machining heavy parts has pyramided the difficulty of reconditioning or repairing much heavy oil-field and pump-station equipment.

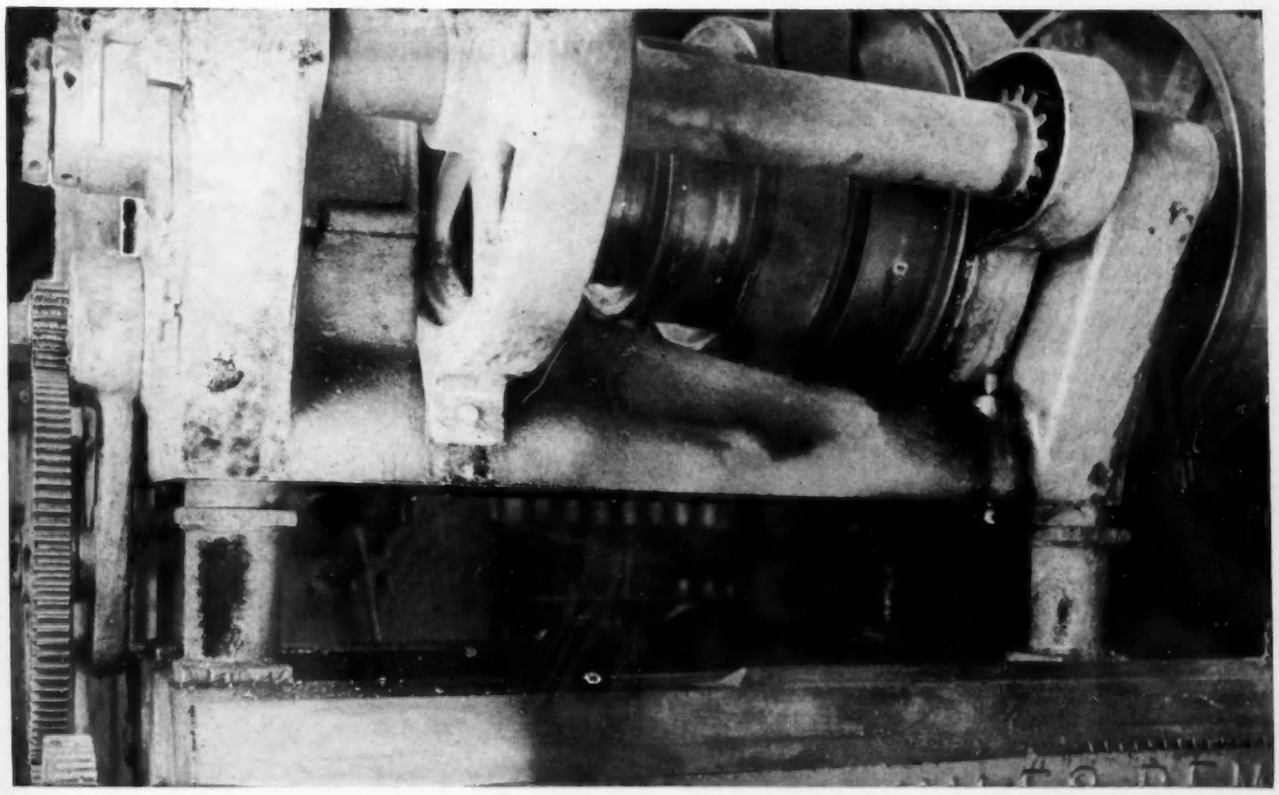
Where, as a last resort, it was formerly possible to take a big job to the nearest railroad shop for necessary machining, now the demands being made on that shop equipment by the greatly heightened service required from rolling stock has made it necessary for the railroads to conserve their diminishing force of trained machinists and to spread their services over imperative reconditioning of locomotives and cars to keep up the unprecedented and unforeseen heavy movement.

Confronted by demands from the oil industry which hitherto have been passed on to shops better equipped to meet special conditions, oil company repair and maintenance units and those jobbing shops still available to the industry are revamping their equipment and extending their activities.

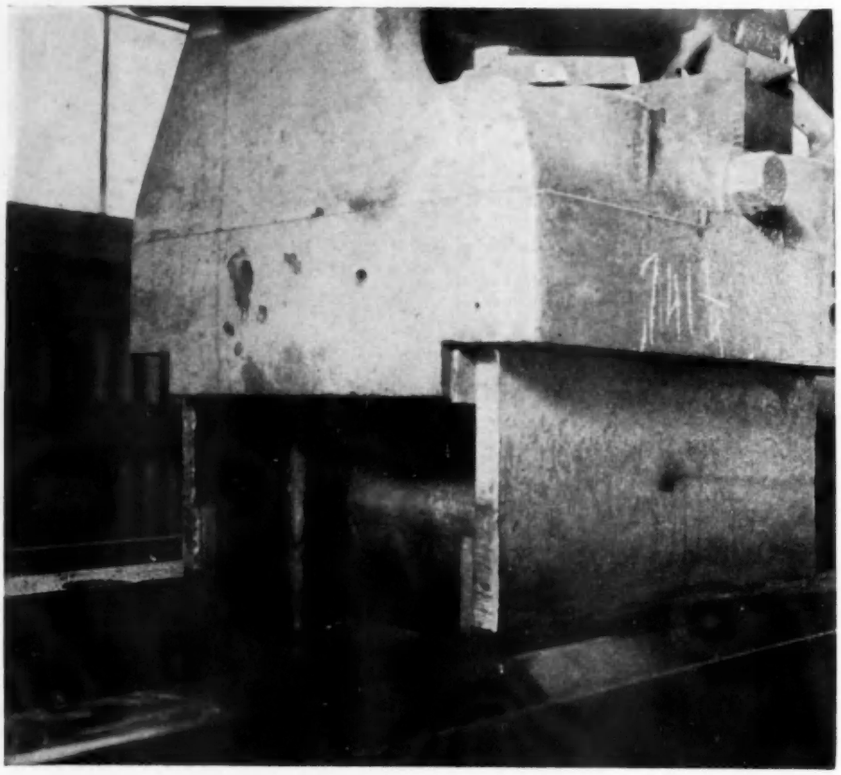
One instance of such expanding of the serviceability of a tool is shown by a lathe which formerly swung up to 30-inch diameter work, and which dimension represented maximum rotating capacity of the shop. Since this limiting figure fell short of accommodating reduction unit master gears and other parts requiring turning operations when being reconditioned, it was decided to increase the capacity of the lathe by boosting the swing to 42 inches.

The headstock was lifted from its former position on the bed casting, and the short studs formerly used to attach it were replaced with units long enough to take in the four spacers on which the headstock was to be supported. These spacers were made up from 5-inch sections of drill pipe, cut off and faced to match, at the top and bottom of which were welded squares of heavy plate, and on top of which, when in place and threaded over the studs, were spacing washers to allow levelling and to perimt the stock to be accurately aligned with the center line between and parallel to the ways.

When the nuts on the studs were pulled tight the headstock was firmly



Spool spacers under the four corners of the headstock provide the desired additional clearance between work and ways and provide support adequate to withstand stresses set up when turning heavy, unbalanced work on the chuck.



Adjustment of the tailstock is retained with this pair of planed and matched plates, held rigidly in line by the section of pipe welded between them, and guided along the ways by the ears welded to the lower corners of the plates.

held in place, the bearing of the four corner spacers being sufficient to insure the required rigidity to withstand the eccentric loading of unbalanced work at normal turning speeds.

The tailstock, which could not sacrifice adjustability or mobility to the need for greater clearance over the vees, was supported on a heavy steel spacer. This was built up from two slabs of 1¼-inch steel, to which were welded ears to project within the lathe bed and provide guides for maintaining alignment. The paired slabs, after being planed to match, were tied together with a short section of heavy pipe, welded in place and accurately maintaining the parallellism of the spacer plates.

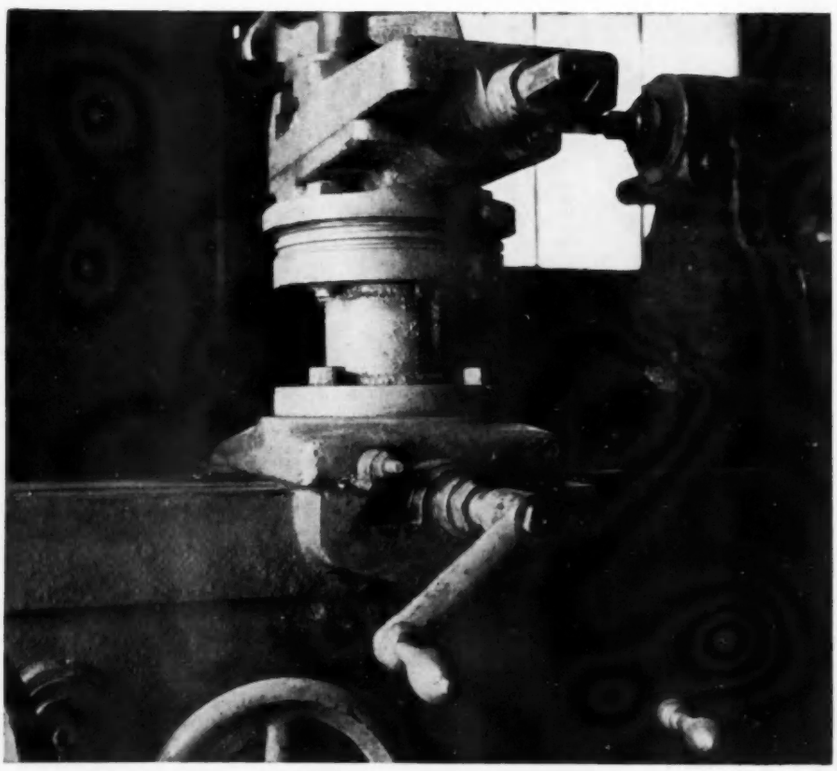
The usual clamping bolts were removed from the tailstock and a pair of bolts long enough to span the added gap were inserted, the former locking plate below the ways being retained, and adjustments made as previously, at the top of the casting.

To provide increase in the height of the tool post without sacrificing any of the cross feeds formerly used with the lathe, a spool was built up from drill pipe, welded between a pair of heavy flanges, the whole being faced to bring the two outer surfaces of the flanges parallel. Holes in the lower flange permitted the unit to be bolted to the cross slide, similar holes in the top matching with the bolts which formerly had been employed to bolt the tool post slide to the cross slide unit.

To provide means for raising or lowering the tool post more than the amount possible through the use of wedges in the tool post slot, a set of spacer washers was made up, of a diameter practically that of the flange forming the bearing surface of the spool, and drilled to fit the two bolts used in attaching the post unit. By the use of a number of spacers of various thicknesses between post body and spool, it is possible to approximate closely the desired tool setting with respect to the center of the work without requiring the use of false work or cribbing between tool and post-clamp screw.

Although the increased height of the three portions of the lathe does not present as sturdy an appearance as the former close-bolted set-up, the shop has successfully turned out on this lathe work of 30-inch diameter with a tolerance of less than 0.0005-inch across parallel faces, and has swung heavy work up to the capacity of the lathe in its former condition.

For close work on small diameter jobs, when the oversize or stretched lathe must be used or work forced to wait until smaller units are free, provision of a small platform for the operator lessens the fatigue of close supervision. On large work, such a set-up simplifies, rather than complicates, control of the work and checking of tool condition.



Unbolting the tool slide from the cross slide and interposing this spool brings the tool to the new center line established by raising centers, and enables full use to be made of all former adjustments and settings.

Quick, easy tests for qualitative identification of some common white metals and alloys

The following procedures will distinguish among Monel, "S" Monel*, "K" Monel*, Nickel, 30 per cent copper nickel, nickel silver, Inconel*, chromium-iron and chromium-nickel stainless steels, Ni-Resist*, ordinary steel, and cast iron. Before testing, the material should be cleaned with emery cloth or a file to remove dirt, grease or corrosion products, or any metallic coating such as galvanizing.*

Test with a Strong Horseshoe Magnet

1. If the material is strongly magnetic, it may be nickel, ordinary steel, cast iron or chromium-iron stainless steel. Confirm as in Procedure A.

2. If the material is slightly magnetic, it probably is Monel† or cold-worked 18-8 stainless steel with or without molybdenum. Confirm as in Procedure B or heat the specimen in hot water, preferably boiling, and retest with a magnet while hot. If the specimen loses its magnetism when heated it is MONEL.

3. If the material is non-magnetic, it may be copper nickel, nickel silver, "K" Monel, "S" Monel, Inconel, chromium-nickel stainless steel with or without molybdenum, or Ni-Resist. Confirm as in Procedure C.

Procedure A

FOR STRONGLY MAGNETIC MATERIALS

Place a drop of concentrated nitric acid on a cleaned area.

1. If the acid reacts slowly to a pale-green color, the material is NICKEL.

2. If the acid reacts slowly to a brown-black color, the material is either ORDINARY STEEL, LOW-ALLOY STEEL or CAST IRON.

3. If no reaction occurs, the material is CHROMIUM-IRON STAINLESS STEEL.

Procedure B

FOR SLIGHTLY MAGNETIC MATERIALS

Place a drop of concentrated nitric acid on a cleaned area.

1. If the acid reacts to a green-blue color, MONEL is indicated.

2. After reaction has ceased, add one or two drops of water, immerse an iron nail or steel knife blade in the drop and in contact with the test sample. If the nail or knife blade becomes coated with copper, or if a copper deposit appears on the material being tested, the latter is MONEL.

3. If no reaction occurs, the material is heavily cold-worked CHROMIUM-NICKEL STAINLESS STEEL.

Procedure C

FOR NON-MAGNETIC MATERIALS

Place a drop of concentrated nitric acid on a cleaned area.

1. If the acid reacts rapidly to a blue-green color, the material is NICKEL SILVER or COPPER NICKEL.

2. If the acid reacts to a green-blue color, the material is "K" MONEL or "S" MONEL. The form of the material will usually assist in identification since "K" Monel is never cast and "S" Monel is never wrought.

3. If the acid reacts to a brown-black color, the material is NI-RESIST.

4. If no reaction occurs, the material may be either Inconel or chromium-nickel stainless steel with or without molybdenum.

To distinguish between Inconel and the stainless steels:

(a) Place on the sample a few drops of a solution containing 10 gm. of cupric chloride ($CuCl_2 - 2H_2O$) in 100 cc. of concentrated hydrochloric acid and allow it to stand for 2 minutes. Then slowly add a few drops of water, one drop at a time, and finally wash off the solution. If a copper-colored spot remains, the material is CHROMIUM-NICKEL STAINLESS STEEL with or without molybdenum; if an uncolored etched spot remains, the material is INCONEL. Or

(b) Place 1 drop of concentrated hydrochloric acid on a clean surface of the alloy and allow it to react for 1 minute. Then add 1 drop of an acid ferricyanide solution containing 1 per cent by weight of potassium ferricyanide, $K_3Fe(CN)_6$, and 10 per cent by weight of sulfuric acid. If a dark blue color appears quickly, the material is CHROMIUM-NICKEL STAINLESS STEEL with or without molybdenum; if no color develops it is INCONEL.

(c) A distinction may be made between the types 316 and 317 stainless steel, which contain molybdenum, and the chromium-nickel types 302 and 304. The test is made by immersing the alloy in an aqueous solution containing 75 per cent by weight of orthophosphoric acid (H_3PO_4) and 1 to 30 gm. per liter of sodium chloride (common salt) at 140° to 200° F. If the stainless steel does not contain molybdenum (Types 302 or 304) bubbles of hydrogen will begin to form within 30 sec. If the alloy contains molybdenum (Types 316 and 317) bubbles will not form. The quantity of sodium chloride and the testing temperature are not critical within the limits indicated.

*REG. U. S. PAT. OFF.

†This test should be made preferably after cooling the metal with ice water or a freezing mixture, which will increase the magnetic strength and permit easier distinction between Monel and nickel-copper alloys of lower nickel content, e.g., nickel silver.

THE INTERNATIONAL NICKEL COMPANY, INC., 67 WALL STREET, NEW YORK, N.Y.

★ ★ **INCO NICKEL ALLOYS** ★ ★

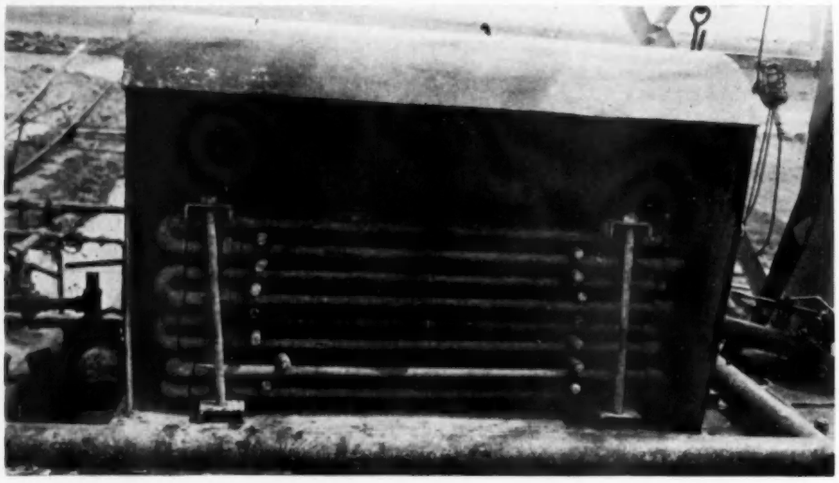
MONEL • "K" MONEL • "S" MONEL • "R" MONEL • "KR" MONEL • INCONEL • NICKEL • "Z" NICKEL

Sheet...Strip...Rod...Tubing...Wire...Castings

PRACTICAL OPERATING *Hints* FOR

1. *FLOOR HEATERS*

Shielded Steam Coil Directs Heat Effect



Radiator set within hood of tank steel prevents accidental contact and possible serious injury to personnel. Enclosure also reduces heat loss and increases benefit to driller.

THE open type of derrick floor heater not only is a hazard for the workmen by reason of the exposed piping carrying steam, but it also is wasteful of heat, only a small portion reaching the driller. To avoid both these objections, one contractor encloses the coil in a rectangular box of light tank steel, open only at one side, and carrying the pipe on raised supports so as to permit air circulation around the steam unit.

This box directs a much larger amount of heat than can the open coil, and also prevents a man coming into accidental contact with the steam lines. The rounded steel top of the box prevents the device being used as a shelf and possibly overloaded, to cause accident in that manner. The steel cover also protects the pipe against possible breakage through dropped or falling objects, and thus eliminates a possible cause of steam burns.

The unit is skid-mounted for greater stability and easier moving, and may easily be removed from the derrick floor.

2. *EXHAUST PIPING*

Flexible Tube Tie-in To Underground Unit

CONDITIONS at the well site sometimes require the complete muffling of the exhaust from drilling engines and, in closely built-up sections, also prevent the blowing of exhaust gases to air.

When an underground muffler is required to meet such demand, one contractor uses a section of flexible metal tubing between the end of the engine exhaust manifold and the muffler head. Tight connections are assured by welding the flexible tubing to short pipe nipples or swages of the proper diameter to connect with muffler and exhaust, with a flange union used at one end to permit make-up or disconnecting without imposing twist on the tubing.

Such a conection relieves the exhaust manifold of the vibration sometimes met when carrying a heavy muffler above the engine, and provides amply for any expansion without stress either on muffler or on power unit.

Where the tubing is used in cramped quarters, painting it red with heat-resisting paint helps call attention to it, and thus prevents accidental injury through grasping or contacting the hot exhaust.

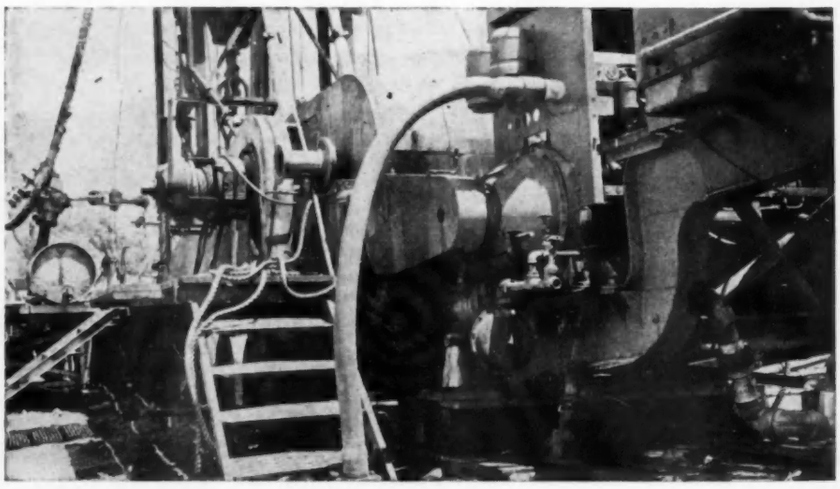
3. *MAINTENANCE*

Oil Shield Protects Under-floor Engine

ONE OF THE disadvantages of the use of under-floor drilling engines lies in the difficulty of keeping them clean and in a condition where they may be readily serviced and checked at regular intervals.

In partially overcoming this problem, one company installs its drilling engine in the left hand rear corner (from driller's position) of the understructure of the rig. This corner is least likely to have mud, water and oil splashed on the derrick floor, and in addition, the engine is more exposed and is accessible from at least two sides.

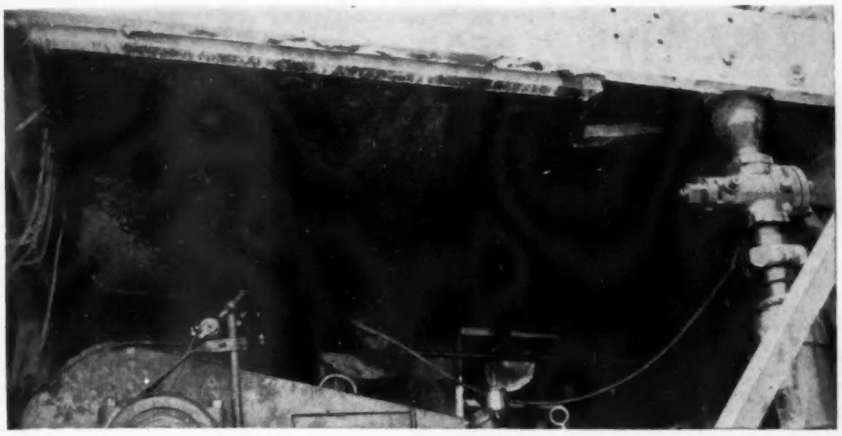
In order to protect the engine from



Where limited clearances require venting of hot gases below ground, non-rigid connection reduces strain on manifold and lessens effect of vibration to muffler assembly.

THE practical operating hints for the drilling rig, production man and pipeliner, appearing regularly in these pages, are secured from oil operations everywhere and offer suggestions that will help to improve operating efficiency and safety.

The items give an excellent picture of the remarkable ingenuity being exercised by the operating divisions of the industry. Contributions to these features will be paid for at the rate of $5 for each illustrated item accepted. Address contributions to "The Editor, The Oil Weekly, Houston."



Fitting of special overhead collector for oil working down from floor units greatly improves conditions of foundations and of units located within the substructure, while aiding oil saving.

drippings that do get through the floor, a large angle-iron-reinforced piece of sheet steel is slung over the engine and slanted toward the inside of the rig to drain off the collected fluid. Oil and grease cups, inspection plates, and bearing ends are thus protected from the flushing action of the overhead drippings, and maintenance is greatly facilitated.

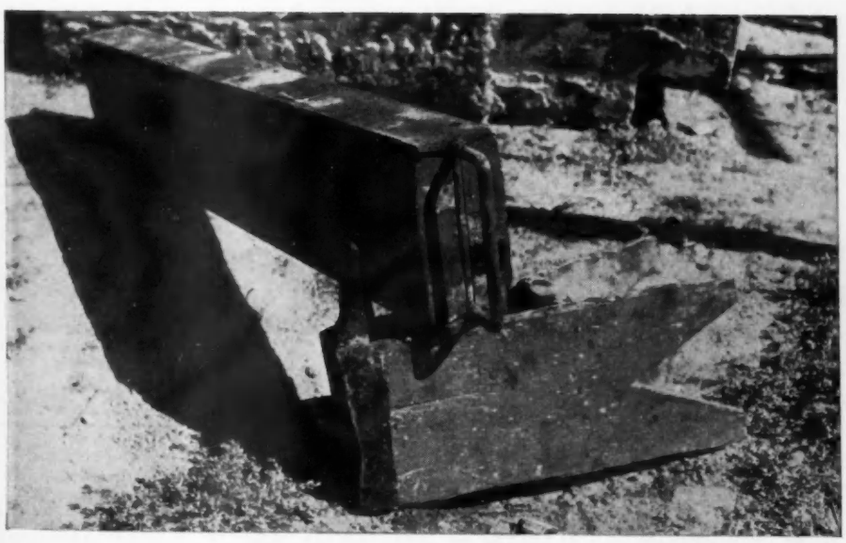
4. *RIGGING UP*

Standardized Blocking Speeds Rig Leveling

ELIMINATING the ever-present problem of searching for the right-size blocks and skids when moving heavy drilling equipment from one well to another, the superintendent of one large company had special blocks made up which are kept with the equipment at all times and which replace the miscellaneous lot usually assembled.

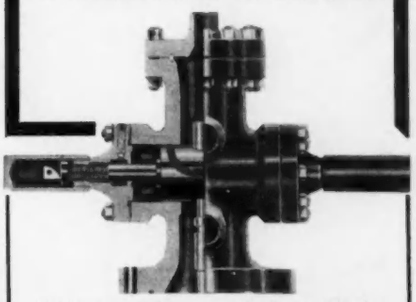
To the end of a 4-foot length of salvaged 10-inch channel iron was welded a convenient sucker-rod handle. The edges of two 2-inch planks of the same length were planed at an angle to fit snugly inside the channel of each side of the steel member. Bolted in, the planks serve as a cushion, and aid in the levering up or down of heavy equipment when the block is used as a skid. The steel channel lends ample rigidity and weight to the block, making it suitable for almost any type of job in which it may be used.

Several such blocks, carried with the heavy timbers and blocking necessary on each rig, have well repaid the original cost of construction.



Formed timber spacers, fitted within the flanges of short lengths of heavy I-beams, make these blocking units highly desirable for shoring rigs or as sub-bases for equipment set at ground level.

RECTOR
ROUND RAM
TUBING HEAD



Tubing may be suspended on (1) the rams, by means of a special recessed tubing coupling, threaded for back pressure valve; (2) on mandrel in bowl above rams; (3) on slips in bowl above rams. In some areas a stripper may be used to run tubing with the rams in the open position. Your composite catalog has complete details.

STOCKS OF ALL TYPES AND SIZES OF RECTORHEADS ARE AVAILABLE FOR IMMEDIATE DELIVERY.

RECTORHEAD
"MAKING THE OIL INDUSTRY SAFER"

EVERYBODY EVERY PAYDAY AT LEAST 10%

WAR MEMO:

The aims behind the War Bond Payroll Savings Plan are worth repeating over and over:

1. To help pay the stupendous production costs of winning this war.

2. To siphon into production channels that portion of America's *current income* which would otherwise flood the Nation with inflationary cash.

3. To create individual backlogs of financial security for use during the industrial readjustment after the war.

4. To create a Nation-wide saving habit which will serve the interests of both Capital and Labor after the war.

Keep after that "10% of gross payroll goal"! Buy War Bonds to the limit yourself—encourage your employees to do likewise!

☆ ☆ ☆ ☆

Lane-Wells now makes available to operators in Gulf Coast and Mid-Continent fields a revolutionary Selective Perforation Cleaning Service.

Regardless of how the casing is perforated—with drilled holes, gun perforation or slotted openings—the Selective Perforation Cleaning Service thoroughly re-opens every perforation in the casing or liner.

This Service is licensed under patents of The Ford Alexander Corp. and has been successfully used on more than 100,000 feet of producing zone. The action of the cleaner pulverizes any deposit of cement which may have been left in the casing or in perforations.

It dislodges any corrosion or scale which may have formed. It removes mud or other drilling deposits such as paraffine, asphaltum and like deposits. No acids or other injurious substance is left in the well.

The Cleaning is Selective and may be used in lengths of from one to one thousand feet on a single run.

CALL YOUR LANE-WELLS BRANCH

BEFORE—*This demonstration length of 7-inch slotted liner is plugged with litharge.*

AFTER—*Plugs removed, perforations clean.*

LANE-WELLS

Tomorrow's Tools-Today!

TECHNICAL OIL FIELD SERVICES

Wherever men drill for oil!

General Offices and Export Office
5610 South Soto St., Los Angeles

The Week's News

November Production Ordered Below October

Production of petroleum liquids next month is cut 34,800 barrels a day from present allocations, under recommendations issued by OPC October 21 calling for a production rate of 4,031,400 barrels daily.

Although only slightly below the October level, the November output will be considerably under the actual of 4,311,700 barrels a day for the same month last year, it was disclosed.

While a number of states will have their rates changed, the heaviest shift will be in the Southwestern States where the November output will be 32,800 barrels a day below October.

"Weather conditions, diversion of some petroleum tank cars to other services, unusually heavy traffic on the railroads, and other factors have prevented the railroads and the oil industry from maintaining the record-shattering tank-car movements attained during September," it was explained by Deputy Co-ordinator Davies. "Consequently, it will be impossible at present to count upon moving as much oil out of the Southwest as heretofore. While the temporary reduction in the number and speed of tank-car trains continues, production in the Southwest must be curtailed."

The state recommendations announced by OPC showed that all of the District 1 states will produce less oil in November, New York being cut back from 15,400 to 15,100 barrels, Pennsylvania from 50,800 to 50,500 barrels and West Virginia from 16,000 to 15,600 barrels, the total for the district being 81,200 barrels compared with 82,200 barrels for the current month and 75,400 barrels actually produced last November.

In District 2, Illinois will be increased from 280,000 to 280,900 barrels and Kansas from 294,000 to 300,700 barrels, the latter being designed to partially offset the continuing loss of ability to produce. All other states in the district will be reduced, Indiana from 19,000 to 18,400 barrels; Kentucky from 13,800 to 13,600 barrels; Michigan from 65,700 to 64,500 barrels; Nebraska from 3500 to 3400 barrels; Ohio from 11,400 to 10,400 barrels and Oklahoma from 417,000 to 407,500 barrels. The total for the district will be 1,099,400 barrels, against 1,104,400 barrels this month and an actual of 1,214,800 barrels last November.

In District 3, reductions were general with the exception of Mississippi, left unchanged at 50,000 barrels, with Texas dropped from 1,407,600 to 1,381,000 barrels; Arkansas from 79,500 to 77,200 barrels; Louisiana from 337,200 to 333,800 barrels, and New Mexico from 101,100 to 100,600 barrels. The total for the district will be 1,942,600 barrels against 1,975,400 barrels this month and 2,223,500 barrels in November, 1941.

With Colorado unchanged at 7000 barrels; Montana was increased from 24,400 to 24,800 barrels and Wyoming from 90,800 to 94,400 barrels, increasing the District 4 total to 126,200 barrels from 122,200 barrels this month and 109,100 barrels last November.

California production was left unchanged at 782,000 barrels, comparing with 688,700 barrels in November a year ago, to enable it to meet West Coast war requirements.

Arkansas Commission Asks M-68 Spacing Exception

The State of Arkansas, acting through its Oil and Gas Commission, has filed an application with OPC for an exception under Conservation Order M-68 for the development of the Texarkana condensate field of Miller County.

The application seeks to have the field developed on a basis of 1 well to each 160 surface acres in lieu of 1 well to each 640 surface acres. The exact limits of the field are not determined as yet, but based upon geophysical findings it appears that approximately 15 wells on 160-acre spacing would suffice. The application states that the field, when developed, could furnish 1600 barrels of 70-degree distillate, 15,000 gallons of natural gasoline, butane, propane, together with 50 million cubic feet of natural gas each day.

Mid-Continent AIME Schedules Two Papers

The Mid-Continent Section of the American Institute of Mining and Metallurgical Engineers will hold its first fall meeting at the Mayo Hotel, Tulsa, on October 26, 1942, at 8 p.m. Two papers concerning water flooding will be presented. R. C. Earlougher, Geologic Standards, will present a paper on "The Efficiencies of Water Flooding," and H. S. Milam, Phillips & Milam Oil Company, will present a paper on the "Economics of Water Flooding."

News Index

Washington 11
Markets-Statistics 47
Men in the News 60
United States Field Operations:
Arkansas 57
California 57
Colorado 59
East Texas 52
Eastern States 58
Illinois 49
Indiana 49
Kansas 50
Louisiana 56
Michigan 58
Mississippi 57
Montana 59
New Mexico 50
New York 58
North Texas 51
Ohio 58
Oklahoma 50
Pennsylvania 58
Rocky Mountain 59
Southwest Texas 55
Texas Gulf Coast 56
Texas Panhandle 52
West Texas 51
West Central Texas 52
West Virginia 58
Wyoming 59

Few Changes in Allowables Expected in Texas

Various plans for adjusting Texas' proration system to meet war conditions were advanced at the statewide hearing at Austin last week. The majority of these programs involved new systems for allocating production from wells in the East Texas field which produce large volumes of water.

When the pipe line is completed from Longview north about the first of the year, it will be necessary to obtain 300,000 barrels daily from East Texas. The programs being submitted now are designed to prepare for supplying that oil.

East Texas now is producing 350,000 barrels of oil daily and 400,000 barrels of salt water. Most of the salt water is from 1000 wells on the west edge. This leaves 24,000 wells producing relatively small amounts of water. The wells producing little salt water could produce far more oil if salt water production were eliminated. Purpose of proposals concerning East Texas offered at the hearing were designed to eliminate the salt water production, and permit the increased production of oil.

On a statewide basis, Commission Chairman Ernest O. Thompson suggested that the commission might ease the situation by fixing the allowable for each well on monthly basis, rather than on a daily basis. Thus an operator could produce whenever he saw fit during the month the oil assigned to a particular well and use to the best advantage the manpower and materials which are available now.

There were several objections to this proposed change, the most significant of which was the fear expressed by many operators that the result would be production at too high a rate from some of the wells which might cause coning of water and excessive withdrawals from localized areas.

Commissioner Olin Culberson objected to the program because he is anxious to avoid another series of lawsuits which he feared might result if the change is made.

Culberson suggested the commission might fix a daily allowable for each well and specify the number of shutdown days. Operators would then be allowed to produce on those days they elected, rather than on certain dates. In the event of overproduction on one day, to allow balancing during the succeeding month, rather than the succeeding week.

As a second alternative, aimed primarily at encouraging wildcat operations, Culberson suggested extension to 18 months a high allowable for wells in new fields. The order now permits the high rate of production for 12 months when a field is discovered, or until more than five wells have been drilled.

Operators generally agreed with Culberson's plans referring to the shutdown program but did not think that extending the new field allowable period would be a substitute for an increase in the price.

A plan offered by Joe Zeppa of Delta

Drilling Company was designed to take care of the East Texas situation. It is the most complicated program which has been offered so far, but received general approval of the operators.

However, because of its complications, the commission recessed until October 29 the portion of its hearing dealing with this plan so that operators may study it fully.

The Zeppa plan provides for the closing in of all marginal wells in East Texas producing 100 barrels, or more, of salt water daily. The plan is to operate on a voluntary basis.

If a well is closed in the allowable would be transferred to another well which makes no salt water and production would continue for the transferred allowable over a period fixed by a decline curve.

This decline curve would be based on the potential of the well at the time the transfer is made.

For instance, a well producing 18 barrels would have its allowable transferred and produced from another lease and the allowable for the well so transferred would decline at the rate of 1 barrel per month for 18 months. The decline rate could, of course, be 2 or 3 barrels per month. The plan submitted was not specific in this respect. In any event, however, it was proposed that such a decline would not extend beyond 18 months.

In assigning the transferred allowable no more than 6 barrels of such allowable could be produced from any one well, nor could such assignment be made to a well producing more than 25 percent water.

As a means of meeting the pumping situation in East Texas, the commission announced that a policy had been established whereby allowables may be transferred from one well to another on the same lease. This program is designed to meet WPB order M-68 which forbids the installation of a second pumping unit on tracts of 10 acres or less. The plan calls for submission by an operator of a plat of his lease and the surrounding property, together with a statement of the condition of his lease which would include details of the proposed transfer of allowables, showing the wells to which additional oil is to be assigned. Offset operators will be notified a hearing will be held at Kilgore after which the commission will issue its order approving or denying the change proposed. Several applications for such changes were offered at the hearing and will be the first subjected to this program.

Few changes in allowables were urged by operators. It appeared that conditions in the fields generally were relatively the same as they were during October. Nominations totaled 1,558,175 barrels for November which was an increase of 2230 barrels daily above October.

High allowables for North Texas were requested. Most of the oil is going to the northern market.

Culberson suggested that operators might furnish laboratory analyses of their oils which would lead to reclassification in some instances with the prospect of a better market for the reclassified grades.

At the end of the week the commission had prepared its order but since a majority was not in Austin the order remained unsigned. Few changes were anticipated.

Taber Well Makes Largest Flow in Canada

Production of oil at the rate of 330 barrels daily has been obtained from Standard Oil Company of British Columbia's new well at Taber, southeast of Lethbridge, Alta. This makes the Taber well by far the largest producing well in Canada outside Turner Valley and would appear to prove up a new major oil field.

Fifty oil wells may be drilled in the Vermillion field in Alberta by the Canadian National Railways in an effort to obtain more supplies for the company's oil-burning locomotives.

It is reported that the C. N. R., already using great quantities of fuel from the Vermillion field, is negotiating for property held by Western Drilling Company around Vermillion. While the deal has not been yet completed, it is understood a representative of the C. N. R. is expected in Vermillion to complete further arrangements.

If the deal is completed it is expected the C. N. R. will launch its 50-well program, designed to multiply many times the present supply of fuel oil available.

Peruvian Oil More Important With War

Peru's oil exports, largely developed since the last war, now have become vitally important in supplying the fuel needs of mineral industries in Chile and Bolivia which, in turn, are vital sources of copper, nitrates, tin, tungsten and other metals for United Nations' industry, it was reported last week by the Office of Inter-American Affairs at Washington.

The value of Peruvian oil is multiplied by the proximity of refining facilities, as well as by the saving in tanker trips from Caribbean or United States ports to the West Coast of South America, it was stated. Present refining capacity is 21,720 barrels a day, but could readily be expanded.

Oil production in Peru rose from 10,000,000 barrels in 1931 to a high of 17,595,000 barrels in 1937, but last year fell to around 13,000,000 barrels, partly as a result of lost European markets.

Additional oil reserves have been located on the eastern slopes of the Andes, in areas connected by river transportation with the Upper Amazon Basin, and the accessibility of these fields to the region where rubber output in expanding may facilitate the development of rubber production for the United Nations.

It was pointed out that Brazil has only low-grade oil shale deposits, and if the Peruvian source was not available oil would have to be shipped thousands of miles by sea to the mouth of the Amazon and another 1200 miles to Manaos, and then transhipped to river boats for points further up the Amazon River.

Federal Gasoline Tax Off; Pipe Line Total Increased

Federal gasoline tax collections totaled $29,204,879 in September, slightly above the August total of $28,662,169 but $4,650,000 under the September, 1941, receipts of $33,854,755, it was reported by the Internal Revenue Bureau October 21.

Definitely reflecting East Coast rationing and voluntary conservation in other sections of the country, gasoline-tax receipts for the first nine months of the year, $255,890,248, were nearly $19,000,000 under the $274,599,449 reported for the corresponding period last year.

Revenue from the tax on lubricating oil also declined, amounting to $2,933,417 in September against $4,081,517 in August and $3,576,516 in September, 1941, and for the nine-month period amounted to $30,299,610 against $32,532,024 last year.

Collections on pipe-line transportation were fairly well maintained, the September total of $1,046,176 comparing favorably with the $1,304,985 of August and the $1,084,838 of last September, and for the nine months showed an increase over last year, $10,250,772 against $9,850,558.

Shell Natural Gasoline Plants Make Safety Records

The four natural gasoline plants operated by Shell Oil Company in its Texas-Gulf Area have completed one year of continuous operation, ending August 1, 1942, without a disabling injury. This is a noteworthy achievement in view of the extensive construction programs during this period at the Magnolia, Arkansas, and Wasson, Texas, plants, and the extensive repairs at the Hobbs, New Mexico, plant.

The Iowa, Louisiana, plant, J. L. May, superintendent, has the enviable record of eight straight years of continuous operation without a disabling injury.

The Magnolia plant, C. E. Haines, superintendent, has suffered only two disabling injuries, both of a minor nature, during its 2½ years of operation up to August 1, 1942.

The Wasson plant. S. W. Craig, superintendent, has suffered only one disabling injury from beginning of operations in November, 1939, to August 1, 1942.

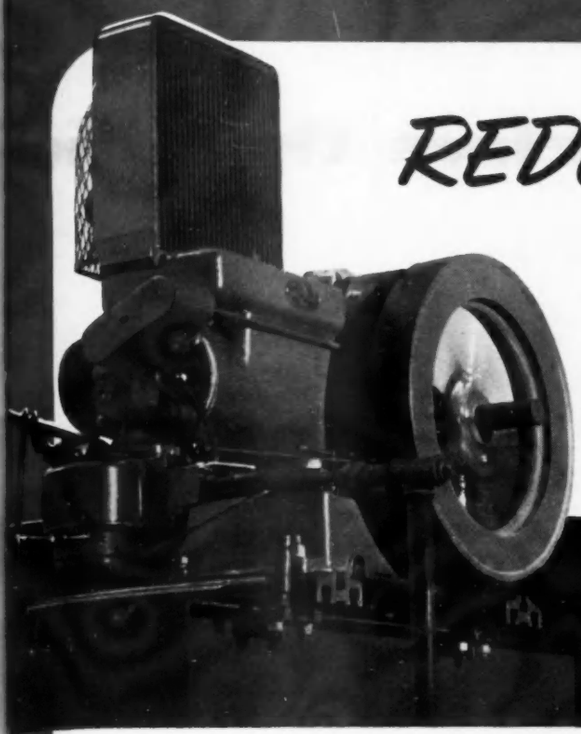
The Hobbs plant, T. W. Brown, chief engineer, was taken over by Shell on August 1, 1941, and has suffered no disabling injuries for the year ending August 1, 1942.

Tulsa AIME Plans Fall Opening October 26

The Mid-Continent Section of AIME is holding its first fall meeting in Tulsa, October 26, at 8:15 p. m. Speakers for the evening session will be R. C. Earlougher, Geologic Standards, Tulsa, and H. S. Milam, Phillips & Milam Oil Company, Chelsea. Two papers concerning production of oil by water flooding will be presented, these being folowed by discussion. J. A. McCutchin will be chairman of the meeting.

Carbon-Black Plant Operation Authorized

Cabot Carbon Company has been given permit to operate a carbon-black plant near Guymon, Texas County, Oklahoma. The proposed plant will process 7,000,000 cubic feet daily, construction work being started immediately. The plant will provide a market for some of the gas produced in the Oklahoma sector of the Amarillo-Hugoton field, a general area now being subjected to a ratable taking investigation by Kansas and Oklahoma conservation departments.



REDUCE ENGINE MAINTENANCE to a "Simple Field Service Job"

FAIRBANKS-MORSE ZC ENGINES

- **NO SKILLED LABOR NEEDED**—Simplicity of design and accessibility of working parts makes it an easy job for the ordinary field man to service or repair the Fairbanks-Morse ZC Engine.
- **NO MACHINE SHOP NEEDED**—There is no need for a machine shop—the Fairbanks-Morse ZC can be completely serviced in the field, a saving in both time and transportation.
- **PARTS READILY AVAILABLE**—With proper care, the Fairbanks-Morse ZC Engine rarely needs a replacement part . . . however, when parts are needed they are readily available in all Continental stores.
- **DEPENDABLE AND DURABLE**—Engineered to run 24 hours a day—service is reduced to an occasional field adjustment.

The Fairbanks-Morse ZC Engine is truly an outstanding performer. Its simplicity will amaze you, making it a sure cure for today's maintenance headaches.

If you have any kind of a power problem check up on the Fairbanks-Morse Engine. There is a size to fit practically every requirement. Immediate deliveries can be made from stock. Ask your neighbor about his ZC Engines and you will readily learn how to reduce maintenance to a *Simple Field Service Job.*

Buy U. S. WAR BONDS & STAMPS

THE CONTINENTAL SUPPLY COMPANY
General Offices: DALLAS, TEXAS
Foreign Sales Subsidiary
CONTINENTAL EMSCO COMPANY, Inc.
30 Rockefeller Plaza New York City, N. Y.
Representatives:
LONDON MARACAIBO BUENOS AIRES TRINIDAD

30th ANNIVERSARY 1942 CONTINENTAL SUPPLY CO.

CONTINENTAL

SERVING THE OIL AND GAS INDUSTRIES

Independents Declare Only Higher Prices Will Prevent Oil Shortage

By WARREN L. BAKER, Editor

THE cry that, unless something is done to encourage exploratory drilling, to develop new reserves and also insure the continued operation of stripper wells to preserve known reserves, the United States, confronted with the responsibility of furnishing increasing petroleum supplies to the war effort, will face a shortage of this strategic commodity reverberated throughout the Thirteenth Annual Meeting of the Independent Petroleum Association of America, held in Wichita, Kansas, last week. Practically every speaker, every resolution and every committee report stressed the dangerous downward trend of the nation's petroleum reserve picture, and concluded that a disastrous influence on the war effort would result unless greater attention and incentive for increasing the available supply of crude oil was taken immediately.

New Reserves Needed

These views resulted in the association deciding to form a group consisting of one representative from each oil association to present the picture to all governmental agencies in Washington. It was the concensus of opinion that only higher prices for crude oil could adequately cope with the situation. Unless this was forthcoming, it was maintained repeatedly that the industry should not be held responsible for maintaining a sufficient supply of petroleum, but that the blame should be laid in the lap of Leon Henderson, head of OPA, who is the only government agency opposing the advancement of oil prices. OPC, representatives of the Army, Navy and the industry have recently testified as to the importance of maintaining an adequate supply of crude oil, and at the same time expressed fear that present curtailment of exploratory type drilling and inauguration of additional secondary-recovery work. Such work, it was asserted, was being restricted because cost exceeded any possible financial return.

The views of association members was well expressed by a report of the committee on secondary recovery, which said, in part:

"There is and can be but one objective in the effort and thoughts of the independent oil operator or any other patriotic citizen of America—that of winning the war. That objective can be attained only if an adequate supply of one of the most vitally needed resources —crude oil—is maintained. Its attainment requires, not only the development of new reserves, but also the jealous preservation of known reserves.

"New discoveries have equalled but 22 percent of the consumption of crude oil during the first six months of 1942. That this prevailing inadequate price of crude is responsible for this condition is recognized by the suggestion of those vested with authority that operators developing new reserves should receive a government subsidy to supplement that inadequate price. That this will attain the objective of increased explorative efforts is a matter of debate —that it will be no benefit in the preservation of developed reserves is apparent to all.

"The bulk of those reserves is being produced from what have been denominated as stripper wells, which are being abandoned at an unprecedented rate because of their low income value in relation to greatly increased operating costs. These reserves can be maintained only by establishment of a price which will cover those costs and capital charges on the present value of salvageable equipment. . . .

"The conclusion is inescapable that the responsibility for the protection of these reserves and the maintenance of an adequate supply of crude oil is that of the Office of Price Administration, and that it is its duty to the nation to fix a price which will promote new development, permit the continued operation of stripper wells and the initiation of secondary-recovery methods."

The association went officially on record, through adoption of resolutions, as foreseeing the responsibility for producing an adequate supply of petroleum and believing it necessary to discover larger quantities of oil to assure this, while expressing itself as thinking higher crude prices and adequate operating materials essential to this effort.

One resolution asserted that the most important contribution to the war that members "can make is the maintenance of a sufficient supply of crude petroleum available for refining and processing into materials essential to the war effort. That in order to maintain this supply we recognize it is of first importance that all possible effort be made to discover new reserves of petroleum so that there may be a continued ample supply for our country and those countries dependent on us for whatever length of time the war may last."

Another resolution declared that "the United States now faces a serious threat of shortage of supplies of crude petroleum to maintain the present rate of consumption of petroleum products essential to its war program." This statement was explained by assertions that "the exploratory effort normally maintained by the petroleum industry has been seriously impeded by the impacts of war with the result that our discoveries of new reserves from which crude petroleum may be produced are running far behind the normal discovery rate, while at the same time our consumption for essential purposes is being maintained with the certainty of material increase if the present war plans are to be realized. Already areas containing a large portion of our known petroleum reserves are being produced at a rate that seriously endangers the future of such reserves, leaving only a few areas of the United States capable of increasing its present rate of production without seriously endangering the reserves of these areas."

Higher Price Necessary

After pointing out that it is a "historical fact that a price for crude oil sufficient to prevent the abandonment of stripper wells now producing, to encourage the installation of secondary-recovery programs and to provide funds to encourage exploratory efforts in search of new reserves is the only known method of maintaining sufficient petroleum reserves to meet necessary requirements," this resolution declared "the price level for crude petroleum has been frozen on a base which is insufficient to insure continuous efforts to maintain and discover new reserves and is on a depressed basis at this time." To this the resolution added "it now becomes the responsibility of the government to recognize the present situation with relation to petroleum reserves and to grant necessary authority for correcting this situation, or those with whom this authority rests must assume full and complete responsibility for the consequences of their failure to provide sufficient petroleum and its products to successfully maintain our activities during the present war." It is essential, the resolution concluded, "that an immediate and substantial increase in the price of crude petroleum be authorized by proper governmental authorities with the assurance that further and necessary increases may be permitted from time to time until the present trend toward diminishing of our petroleum reserves has ceased. That these price increases should be provided through the normal operations of this industry and that untried and immature subsidy programs will not meet the situation now confronting this nation with relation to this problem within the petroleum industry."

On the matter of operating materials and supplies, a resolution urged governmental agencies to "take immediate cognizance of the materials and supplies shortage with the petroleum industry, the relative needs and importance of petroleum and its products in the war effort, and secure and provide the necessary allocation of critical materials to enable the petroleum industry to secure the tubular and fabricated goods necessary to meet its exploratory, development, production, refining and transportation needs."

Furthermore, this resolution stated "Upon there being made available to the petroleum industry such materials and supplies, there be arranged within the industry itself, equitable distribution of such materials and supplies in order that all units of the industry both large

and small may participate in discharging their obligation . . . "

Two resolutions set forth the views of the association with respect to gasoline rationing. One of these urged rationing authorities to allow operators, executives and workers engaged in the production, refining and distribution of petroleum and natural gas, rationing cards providing gasoline quotas needed to carry on their work. The other that nation-wide gasoline rationing be deferred and that a program limiting the speed to 35 miles per hour be instituted instead.

Expressing the thought that there has been "an unfortunate lack of coordination of activities of the various federal agencies and departments" interested in the problems of petroleum, a resolution was adopted seeking concentrated control of the industry to avoid delays, duplication of efforts and confusion.

By resolution the association protested the selective nomination of oil by the purchaser and also the practice of OPC in nominating the buying of oil from certain fields because of special qualities and values. It recommended as an alternative that OPC furnish the nominations to the state regulatory bodies, leaving the allotments to such state agencies to be prorated among several pools from which it can be obtained.

Some of the additional resolutions asked that the industry's transportation situation be relieved by extension of the big-inch pipe line to the Eastern Seaboard; that to encourage development of government-owned lands the loyalty on all future wells be reduced to the universal one eighth; that the association continue to oppose any changes in the depletion and intangible costs allowances; that legislation extending the primary term of leases and including provisions protecting the industry against forfeiture of leases as a result of governmental laws and rules.

Ickes Discusses Problems

Unable because of pressure of business to attend personally, Coordinator Harold L. Ickes in a telephone address October 21, said the materials situation next year will be "even more dismal" than at present and will be complicated by a problem of manpower.

The best prospect for securing the materials necessary for continued exploration and development, he said, lies in the "pooling" of materials held by operators and the reclamation of idle equipment.

"The OPC considers the encouragement of exploration to be so important that we are determined to do everything within our power to get you the materials that you need, and get them for you in such a manner as to spare you, just as far as we can, the formalities and delay which I know that you frequently find irksome," the coordinator said.

The War Production Board, Ickes told the oil men, has taken the position that the industry should utilize, as far as possible, the inventories which it now has on hand before it can expect serious consideration of pleas for any substantial amounts of new material.

With this in mind, he explained, the OPC has been studying the possibilities of redistribution of equipment held by operators, although nothing specific has yet been agreed upon.

Complementary to this plan, Ickes said, is the program for reclaiming material and equipment which is either idle

Full Text of Address by Harold L. Ickes on Page 15

or can be shifted to some more important war use.

Another problem, equally if not more acute, is that of manpower, which is causing the OPC considerable concern, he continued.

Steps have been taken to deal with this situation, in conferences with General Hershey, Director of Selective Service, the result of which was the issuance of an occupational bulletin setting up some 60 categories in the industry as to which local draft boards are justified in considering deferment.

"It is perhaps not all that you men would like to have," he commented, "but I believe that you will agree that it is substantially more than you had before.

"Nevertheless," he warned, "it will be nothing more than common prudence for you to prepare yourself against further and continuing drains upon your manpower. We cannot have an army of 7,500,000 men without drawing upon your industry and all others to get them.

Buttram Speaks

"Although we had sufficient reserves of petroleum to meet immediate demands at the time we entered the war, these reserves cannot last always. We are now and have been for some time using more than we are finding," was the declaration of Frank Buttram, president of the association in the annual presidential address.

Buttram warned that no one can predict how long the war will last or how greatly the demand for oil will increase and that the nation cannot safely continue to use its supply of petroleum without making all possible efforts to replace such oil with new reserves against future needs, both for war and for the peace to come. Yet, he declared, that is exactly what is being done "with a complacency that must be alarming to those cognizant of the situation."

Wells are being completed at a rate of only 53.8 percent of the completion rate at this time last year. Quoting a governmental authority, Buttram said that the discovery of new reserves is running about 80 percent behind production. "Petroleum," he continued, "is the only essential material about which the government has done nothing to insure a future supply. Except for providing favorable priorities for exploratary work nothing has been done to insure or even encourage the finding of new reserves. On the other hand, many positive hindrances have been placed in our way."

Buttram referred to the subnormal price of crude oil, which he asserted was a deterrent to the continued operation of present fields and is retarding the finding of new ones. He cited the experience of the first World War, when threat of a shortage of petroleum was obvious. Government and the crude oil purchasing companies recognized price as the necessary incentive for exploration and the price advances that were made resulted in the finding of new reserves. Another incentive, he pointed out, was provided in the tax laws, when Congress in 1917 provided for a depletion allowance for the petroleum industry.

The problem of discovery and others of direct concern to the industry are subjects of diligent efforts on the part of Petroleum Coordinator Harold L. Ickes, and his staff, Buttram said. He asserted that Ickes is the "best informed person on petroleum problems, is the fairest administrator and best friend of the industry of all the members of the Cabinet. But," he declared, "there is too much division of authority over petroleum matters in Washington to permit the coordinator to be fully effective." Several other agencies that have authority are the War Production Board, the Office of Price Administration, the Office of Defense Transportation, the War and Navy Department, and others. "In the interest of the greatest accomplishment by this industry for the war effort, this authority should be concentrated, preferably in the Office of Petroleum Coordinator," Buttram said.

"The Road that Lies Ahead"

Sharp criticism of policies that have forced the independent producer into a position where he may not be able to contribute fully to the winning of the war was voiced by Harold B. Fell, executive vice president of the association. His address, "The Road that Lies Ahead," was a review of the past year's work of the association and an analysis of the current problems of the producing industry.

In discussing the price of oil, Fell said "your association has hammered on the door of every agency that touches directly or remotely on this all-important question. The case has been presented in so many ways that I would not attempt a recital. The facts of the case should speak for themselves. Is it indifference, inertia or ignorance that is responsible for the delay in correcting this monstrous abuse of a delegated responsibility to keep the national economy effective in war time?"

Fell said that without government price fixing the price of crude petroleum, responding to the necessity for discovering new fields and to meet the greatly increased costs of producing from present reserves, would be at least 50 cents per barrel higher than it now is.

The outlook for supply of petroleum, and here Fell drew a sharp distinction between estimates of proven underground reserves and the ability to produce currently without waste, is a severe strain on the producing industry. He declared that in three of the districts into which the United States has been divided by the Office of Petroleum Coordinator, production is now at the maximum rate, without waste, from existing fields. These districts are No. 1, the Eastern fields; No. 2, including several states east of the Mississippi and Oklahoma and Kansas; District 5, which embraces California. Some increase in heavy oil in the Rocky Mountain states, District 4, is possible without waste, and the same is true of a part of District 3. In the latter instances he referred to the West Texas-New Mexico and the Gulf Coast areas. His opinion was that such increases would be offset by decreases in other areas.

"I doubt very much whether it would be possible to produce and deliver from existing wells in the United States over four million barrels per day continuously for any great period without wasteful production, and it is recognized that there are now fields already

producing at a rate that will reduce the ultimate recovery.

"The situation clearly is one that calls for discovery of new fields." In this connection Fell referred to recent proposals for meeting the discovery problem by "establishing a price bonus on newly discovered oil, or on production from wells drilled since November 1, 1941, or by subsidizing discovery effort." He declared that such methods would not work, that they are unrealistic.

"Discovery," Fell said, "is financed from the sale of oil production we now have. Wildcatting is hazardous; it has never been a banker's risk. We don't sell stock to the public and get in the money with which to drill wildcats. The money comes out of that barrel of oil which is produced and sold, not that which may be found. Unfound reserves meet no payrolls. Past results have indicated that price is the incentive which results in the discovery of new reserves and the ability to increase production without waste. It is a tried and proven method. In time of war, why abandon the tried and proven for the untried?"

"There is no thought of profits now," Fell continued. "They have been dismissed for the duration. The federal revenue policy takes care of that consideration, along with taxes we have been paying and will continue to pay to the states and their subdivisions."

The Committee on Balance of Supply and Demand, whose quarterly reports have comprised important statistical trends of the industry heretofore, dismissed current trends because of censorship and also delved into the price and supply situation. The report, in part, said:

"Supply and demand have new meanings today. Rationing of gasoline and fuel oil, government directives on the oil industry's operations, the needs of our armed forces and the supporting civilian activities have changed our picture of demand. The real demand today is that quantity of oil which is required to win the war—whether it is for the Army and Navy, essential civilian uses or the needs of our Allies. This committee believes that the most important question that the crude oil producers of this country are facing is whether we can satisfy these demands—not only during this year and 1943 but during 1944, 1945 and succeeding years. No one can know how long this war may last. It should be recognized that more and more petroleum will be needed regardless of how long it may last. This committee believes that it is impossible to overemphasize the importance of this growing reliance upon domestic oil and the absolute necessity of meeting these increased needs."

The report pointed out that "There is ample evidence that conditions have become more serious during the past 12 months" with these words:

"The figures on reserves show that the decline in our rate of discoveries has continued. During the first six months of this year it has been estimated that new reserves found were 50 percent less than during the same period of 1941 and they were declining then. The government has made efforts to prevent the premature abandonment of stripper wells and the resulting loss of reserves but the economic factors which cause such abandonments remain uncorrected and are growing more unfavorable to the continued operation of these properties. Despite the evident need to add to our reserves by new and improved methods of recovery, such operations cannot increase under present cost and price conditions."

After pointing out the many and varied impacts of war, such as transportation difficulties, shifting of markets to particular types of crudes and to areas producing these grades of oil, adjustments in consumption of products with some facing enlarged demands and others less, the committee report asserted:

"This war cannot be won and peace cannot be successful unless we can meet the huge and increasing demands with adequate supplies of crude petroleum . . . The solution of our petroleum supply problem and the future of our war effort demands immediate practical and effective government action to provide the necessary encouragement to the industry to permit it to accomplish the following essential objectives:

"1. Increase substantially the rate of discovery and development of new proven reserves.

"2. Prevent the loss of reserves caused by premature abandonment of stripper wells unable to continue operations under present conditions.

"3. Encourage and make possible at an early date the increased application of secondary recovery methods to provide additional available reserves."

Little encouragement in the matter of obtaining operating materials was offered by G. W. Orton, director of materials for OPC, who said "Sufficient supplies will not be available for even the essential uses unless all non-essential uses are eliminated."

Based on a survey of inventories on June 30 and requirements for the fourth quarter of 1942, as compiled during last August, Orton pictured the requirements "of carbon steel for the quarter as approximating 641,000 tons. We were given an allocation by WPB of 292,000 tons, 45 percent. Alloy steel requirements were shown to be 38,500 tons and we received an allocation of 2500 tons, 6 percent of the quantity desired. Copper and copper-base alloy requirements were found to be approximately 5,400,000 pounds, but only 42 percent of this amount was allocated. These allocations include materials for war plants and pipe-line projects.

Full text of address by G. W. Orton on page 17

"Inventories will be drawn upon very heavily to make up the deficit between requirements and allotments," he declared. "For example, the oil industry's carbon steel inventories on June 30 represented 1,300,000 tons, alloy steel inventories were 63,500 tons, copper and copper-base alloy inventories were 10,300,000 pounds. Notwithstanding the quantities in inventories, an unbalanced condition is known to exist."

Orton predicted that the "Production Requirements Plan will continue through the fourth quarter of this year and the first quarter of next year, for manufacturers and fabricators of metals and metal products. It is probable that it may continue thereafter, perhaps in some modified form, for the same pur-

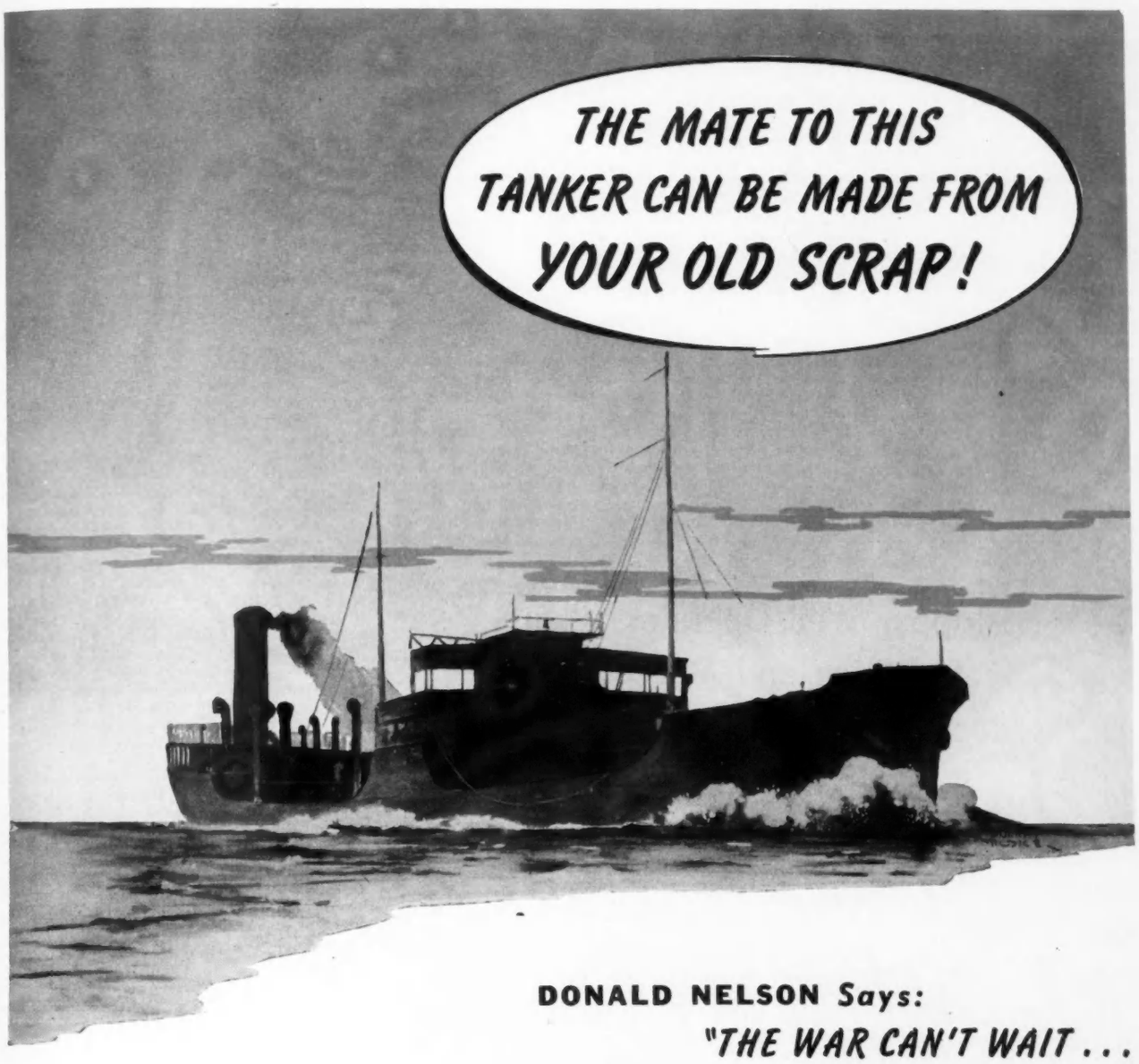
Buttram and Other Officers of IPAA Are Reelected

With the exception of some changes in district vice presidents and executive committee members, all officers of the Independent Petroleum Association were reelected at the annual meeting in Wichita last week. Frank Buttram, Buttram Petroleum Corporation, Oklahoma City, will serve his fourth term as president. Harold B. Fell, Simpson-Fell Oil Company, Ardmore, remains as executive vice president. Others reelected included: Russell B. Brown, general counsel; N. T. Gilbert, Midstates Oil Corporation, Tulsa, treasurer; and C. E. Buchner, executive manager.

Six new members were elected to the executive committee. Three of these fill expired terms, and consist of: Al Buchanan, San Antonio drilling contractor; Paul Pitzer, Pitzer & West, Breckenridge, Texas; and Curtis F. Bryan, Bryan Petroleum Company, Tulsa. The constitutional and by-law committee amended the constitution to increase the executive committee from 17 to 20 members. The new members are to be selected later. C. E. Buchner, the association's executive manager, was added to the executive committee as an ex-officio member.

The new district vice presidents elected were as follows: Illinois—J. H. Steinmesch, Minerva Oil Company, Mt. Vernon; Louisiana — Charles G. Laskey, Southwest Gas Company, Shreveport; Michigan—A. H. Ledbeter, McClanahan Oil Company, Mt. Pleasant; Western New York — George W. Holbrook, Wellsville; Eastern Oklahoma—J. Garfield Buell, Buell, Inc., Tulsa; Southeast Texas—H. R. Cullen, Quintana Petroleum Company, Houston; Northwest Texas—W. L. Stewart, vice president, Westbrook Oil Corporation, Fort Worth; Southwest Texas — Fred W. Shield, Shield Oil Company, San Antonio.

Reelected district vice presidents consisted of the following: Arkansas—John D. Trimble, Bailey & Trimble, El Dorado; California — C. A. Johnson, president, Holly Oil Company, Los Angeles; and A. J. Crites, manager, Anchor Oil Company, Maricopa; Colorado—Warwick M. Downing, Denver; Indiana—Harry H. Nowlan, North Central Oil Corporation, Evansville; Kansas—Edwin N. Carlson, Yarnell-Carlson Oil Company, Wichita; Kentucky—N. W. Shiarella, Miller & Shiarella, Owensboro; Mississippi—J. F. Barbour, Jr., Henry & Barbour, Yazoo City; Missouri—Merle Becker, W. C. McBride, Inc., St. Louis; Montana—A. E. Crumley, Crumley & Aronson, Shelby; New Mexico—C. J. Dexter, Berry & Dexter Drilling Company, Artesia; Eastern New York—John M. Lovejoy, Seaboard Oil Company, New York; Ohio—W. K. Harrington, Henderson Oil Company, Marietta; Western Oklahoma—R. Olsen, Olsen Oil Company, Oklahoma City; Pennsylvania—Don T. Andrus, Andrus & McDowell, Bradford; Northeast Texas — L. A. Grelling, Boren & Grelling, Tyler; Wyoming—E. J. Sullivan, E. T. Williams Oil Company, Casper.



DONALD NELSON *Says:*

"THE WAR CAN'T WAIT . . .

We are counting on the Petroleum Industry to carry through an all-out drive to dispose of all scrap."

The Production front is calling desperately for heavy scrap. Lack of it is cutting the steel industries output by over a quarter-million tons each month.

Your old scrap, salvaged from boilers — steam engines — drilling units, etc., will help furnish the steel for a tanker. An average 122 ft. derrick contains 15 tons of valuable scrap.

Around your home, too, copper — zinc — brass — rubber, all of it vital to the war effort and desperately needed! Let's all turn in our scrap—for Victory.

TURN IN YOUR SCRAP TO WIN THE SCRAP!

REED ROTARY DRILLING TOOLS

REED ROLLER BIT CO.

HOUSTON, TEXAS

poses . . . Oil industry operators, however, will not be required to come under the plan since WPB has agreed that no essential useful purpose would be served by them doing so.

"Present indications," he continued, "are that the oil industry operators will operate under a system of allocations for their major tonnage materials requirements . . . Since the allocations system does not lend itself to the handling of repair, maintenance and operating supplies items, as well as smaller equipment and fabricated items, it is necessary that some other procedure be utilized to insure the steady flow of these materials to users . . . In the case of operators we have been assured that some preference rating order procedure similar to that now involved in the P-98b Order will continue after the first of the year.

Orton did believe that some relief from the order now requiring approval of OPC for transfer or sale of second-hand equipment would be forthcoming, so such commodities could be traded freely.

Russell B. Brown, general counsel for the association, traced the activities of the organization in Washington. He described the part the association has played in the depletion-allowance fight, making of the Connally Act permanent, small business legislation and other matters.

In discussing the crude-price situation, Brown pointed out that a resolution passed by the association a year ago was presented and shortly afterwards a great deal of factual material to support it also was filed with OPA. Nothing has ever been done with the study we gave them, he reported.

"Mr. Henderson," Brown said, "first stated that he was one of a school that didn't believe we needed any more oil, but I think he later modified that statement somewhat. He has never modified his statement about the need of more price to get these reserves. He has other views on that subject, but even here a complete study and a constant presentation of our views and our factual material will finally bring abck a recognition of its importance. So I wouldn't get too discouraged, although I know we are going to have to do a lot of work."

Stripper Well Operators Plea For Price and Materials

With the plight of the stripper-well operator growing increasingly serious under the impact of war, the eighth annual meeting of the National Stripper Well Association, held in Wichita, Kansas, last week, went on record as being fearful that the United States faces premature abandonment of a large portion of its 300,000 stripper wells, which comprise about 75 percent of the total wells in the country. Because these wells produce substantial quantities, and could produce increased volumes from the vast underlying discovered reserves under improved recovery conditions, the association urged that effective action be taken to insure their continued operation. Through resolutions pleas were made for higher crude prices, adequate supplies of equipment and maintenance of present depletion tax allowances.

One resolution petitioned governmental agencies having control over prices to direct a substantial increase in crude-oil prices to correct this dangerous condition. The petition asserted:

"The continued operation of stripper wells and the recovery of the enormous oil reserves underlying these wells is essential to the success of the war. Present prices for crude petroleum do not justify the continued operation of many of these wells, causing premature abandonment resulting in a substantial loss of reserves. Present prices for crude petroleum do not provide the funds necessary for the introduction of secondary recovery methods in many areas where additional billions of barrels of vitally needed reserves could be made available. Present prices for crude petroleum do not provide the funds to the operators of these stripper wells to carry on the necessary leasing, overhead, dry hole and other exploration expenses to find new reserves. Present prices for crude petroleum do not justify the recent increase in labor costs or permit the stripper-well operators to pay wages competitive with less essential industries."

In asking the War Production Board to "take the necessary action to make available the necessary equipment and materials in sufficient time to insure the continued operation of stripper wells, the introduction of secondary recovery methods and the necessary discovery of new reserves so that the petroleum industry can fulfill its vital part in the war program," the resolution on this subject declared:

"The continued operation of stripper wells, the introduction of secondary recovery methods and the necessary discovery of new reserves are vital to the success of the war and cannot be effected without adequate supplies, equipment and materials. Supplies, equipment and materials are becoming increasingly difficult and frequently impossible to secure."

Congress was petitioned not to threaten the ability of the industry to furnish the necessary oil supplies by changing the established tax provisions providing for the present percentage method of calculating the depletion allowance and the present option of expending intangible development costs.

Officers Named

Three new district vice presidents were the only changes made in the National Stripper Well Association officials. A. S. Ritchie, of Wichita, succeeded Guy T. Berry, as vice president from Kansas. Curtis Bryan, Tulsa, took the place of Wirt Franklin, as vice president from Oklahoma. P. J. Noon, Bradford, became vice president from Pennsylvania, succeeding Ralph T. Zook.

Charles P. McGaha, Wichita Falls, Texas, was reelected president. Harold B. Fell, Ardmore, Oklahoma, continued as executive vice president, and Howard J Whitehill, Tulsa, was reelected secretary-treasurer.

Reelected vice presidents include: Richard Fenton, Los Angeles; A. H. Ledbeter, Mt. Pleasant, Michigan; Harry Leonard, Roswell, New Mexico; Lee Mulvihill, Robinson, Illinois; and W. H. Keffer, Ashland, Kentucky.

Kansas Governor Speaks

The association heard Governor Payne H. Ratner of Kansas bitterly denounce government red tape and partisan politics as the spot where the United States is falling down on its war job. "We are mired down," stated the governor, "in a bog of politics slowing up our advance as surely as the mud of Russia helped stop the first Nazi blitzkrieg. Our war machine is still in low gear, almost stalled in the great swamp of bureaucratic red tape. Management of government by the red tape of political bureaucracy is bad enough in peacetime. In wartime, it is intolerable because, if continued, it will mean defeat. . . . Neither major political party is wholly guilty nor wholly free of blame. The game of selfish, partisan politics is played on both sides. The job of kicking out politics and red tape, and substituting effective business management of the war effort, rests upon all the American people. . . . It is imperative that America have a strong, vigorous public opinion which will compel those in authority to conduct this war on the solid rock of business efficiency, instead of the quicksands of political bureaucracy. . . . We must approach this task as patriots, without thought of personal, partisan, or political advantage. . . . Our men on the battlefronts of the world carry no party labels on their identification tags. They sacrifice, endure, fight and die for us—not as members of any political party—but Americans. In the blaze and bloodshed of battle, politics is unthinkable."

Ratner held up the rubber situation as a typical example of the confusion and cross-purpose duplication existing throughout the war effort. "At long last," he asserted, "under the pressure of an aroused public opinion, the President appointed the Baruch committee. In 30 days an investigation was completed. A plan was advanced. Jeffers was named rubber czar. For the first time, the nation is optimistic with regard to the synthetic rubber situation. A business man has been given a business job. We have faith in his ability to get the job done. No one inquires about the political standing of 'Bill' Jeffers. . . . Another man of his caliber went to Washington. He encountered rebuffs on every hand. He ran a blockade of bureaucratic jealousy and red tape. Finally, he enlisted public opinion back of him and got what he was after. Today, Henry Kaiser is turning out ships so fast that people call him a miracle man. He isn't. He is simply an American with business experience, knowledge and ability, and the courage to insist that he be permitted to contribute all he can to the war effort. As in the case of Bill Jeffers, we know little or nothing about Henry Kaiser's politics. We don't care.

"There is urgent need," Ratner continued, "for men of this type in every phase of the war effort. For example, take the oil industry, an outstanding victim of bureaucratic muddling. . . . One agency has charge of production, another transportation, still another of materials, and a fourth controls prices. . . . What this country needs is a central authority with power to correlate and simplify war regulations pertaining to industry."

Markets • Statistics • Prices

Nation Drawing on Stocks Of Crude and Products

The industry continues to encounter difficulties in producing enough crude oil where needed and in supplying refined products where required, as evidenced by latest statistics, covering the week ended October 17.

Crude production has been comparatively high, but it has been necessary to make further inroads into storage, and crude stocks now are only 10,000,000 barrels above the 20-year low which they reached after the Mid-Continent shutdowns of August, 1939.

Production averaged 3,902,000 barrels daily in the week of October 17, the American Petroleum Institute reported. That was 45,000 barrels a day more than in the previous week, although 208,000 barrels or 5 percent less than daily output in the corresponding week last year.

Crude oil stocks were reduced 2,058,000 barrels in the week ended October 10, the Bureau of Mines reported, having come down to 239,121,000 barrels. The decrease partially reflected a subnormal week of production in Texas, but that state accounted for only 1,230,000 barrels of the withdrawal from storage. California took out 359,000 barrels, Oklahoma 232,000, North Louisiana 267,000, and the Appalachian region 124,000, while stocks of foreign crude were lowered 69,000. Illinois and Kansas showed small increases.

Crude runs to stills averaged 3,709,000 barrels daily in the week of October 17, the API showed. They were off 57,000 barrels from the previous week, and were 422,000 barrels or 10 percent lower than in the like week last year. Plant capacity was used to the extent of 77.3 percent.

In line with the reduction of refinery runs, production of gasoline was off 40,000 barrels daily. Output for the 7 days ended October 17 totaled 11,227,000 barrels, compared with 11,511,000 the week before.

Finished and unfinished stocks of gasoline in the United States continued to decline, in reflection of the season and the impending national rationing of that product, for which refiners are preparing. Storage was reduced 775,000 barrels within the week, to 78,956,000 barrels. That quantity was 2,667,000 barrels or 3.2 percent less than the 81,623,000 barrels on hand at the corresponding time last year. The decrease obviously is relatively less than the shrinkage of demand since a year ago.

Efforts to build up stocks of light fuel oils met with limited success, as 919,000 barrels went to storage. That was a little more than the addition in the like week last year. However, with the gain, the stocks stood at only 46,926,000 barrels, or 5,477,000 barrels (10.4 percent) under the total of 52,403,000 barrels on hand October 18 last year. Statistics fully justify the precautions being taken against a shortage of heating oil in the East this winter.

There was only a small change in the week of October 17 in stocks of heavy fuel oils. They totaled 78,537,000 barrels at the end of the week, the API reported, a decrease of 144,000 barrels. That quantity was 17,263,000 barrels or 18 percent less than the 95,800,000 barrels held on October 18 last year, and much of the decrease has been accounted for by California.

Trends of Operations and Changes in Stocks

Figures on crude stocks are from Bureau of Mines weekly reports; all others from American Petroleum Institute weekly reports, which are estimates on Bureau of Mines basis.

ITEM	Crude Oil Prod. Bbls. Day (Add 000)	Crude Oil Prod. Week Ended	Runs to Stills Bbls. Day (Add 000)	Runs to Stills Week Ended	Crude Stocks Bbls. (Add 000)	Crude Stocks Week Ended	Gasoline Stocks Bbls. (Add 000)	Gasoline Stocks Week Ended	Gas Oil & Distillate Stocks Bbls. (Add 000)	Gas Oil & Distillate Stocks Week Ended	Residual Fuel Oil Stocks Bbls. (Add 000)	Residual Fuel Oil Stocks Week Ended
Highs:												
1939	3,910	8- 5	3,650	10-21	278,607	5-26	87,769	4-22	39,562	10-28	116,237	8-26
1940	3,890	3-16	3,690	6-22	265,865	8-31	102,817	4-20	49,051	10-19	109,135	9-14
1941	4,337	11-22	[4]4,120	10-18	266,187	3-29	99,727	3-29	[5]54,983	11-15	102,448	1- 4
1942	[4]4,337	2- 7	3,961	1- 3	263,208	3-28	[1]107,229	3-14	49,357	1- 3	95,857	1- 3
Lows:												
1939	[3]1,601	8-26	3,125	2-18	[2]229,127	10-21	71,152	10- 7	20,722	4-15	105,397	4- 8
1940	3,335	11-30	3,370	1- 6	237,339	1-27	79,847	11- 9	23,551	4- 6	102,344	2-10
1941	3,364	1-11	3,490	1-18	240,399	11-15	79,923	10- 4	28,381	4-12	90,914	7-12
1942	3,297	7- 4	3,393	5-23	239,121	10-10	78,956	10-17	29,240	4-25	76,903	7- 4
Trends in 1942 (Week Ended):												
Jan. 3	4,038	.....	3,961	.....	244,440	.....	92,987	.....	49,357	.....	95,857	.....
Jan. 31	3,871	.....	3,848	.....	250,740	.....	97,810	.....	40,674	.....	91,189	.....
Feb. 28	4,016	.....	3,675	.....	259,373	.....	105,635	.....	34,547	.....	88,285	.....
Mar. 28	3,820	.....	3,667	.....	263,208	.....	105,624	.....	31,756	.....	83,045	.....
April 25	3,581	.....	3,506	.....	257,073	.....	102,897	.....	29,240	.....	81,107	.....
May 30	3,877	.....	3,522	.....	255,023	.....	95,355	.....	31,384	.....	79,628	.....
June 27	3,719	.....	3,581	.....	253,364	.....	88,396	.....	32,851	.....	77,304	.....
July 25	3,691	.....	3,658	.....	249,262	.....	82,281	.....	35,966	.....	77,816	.....
August 29	3,964	.....	3,697	.....	249,007	.....	80,831	.....	42,060	.....	78,034	.....
September 26	3,909	.....	3,802	.....	242,785	.....	80,550	.....	45,945	.....	78,943	.....
October 3	3,685	.....	3,879	.....	241,179	.....	80,361	.....	45,750	.....	79,036	.....
October 10	3,857	.....	3,766	.....	239,121	.....	79,731	.....	46,007	.....	78,681	.....
Oct. 17, 1942	**3,902**	.....	**3,709**	.....	.....	.....	**78,956**	.....	**46,926**	.....	**78,537**	.....
Oct. 18, 1941	4,110	.....	4,131	.....	[4]243,571	.....	81,623	.....	52,403	.....	95,800	.....
Change:												
In week	+45	.....	—57	.....	—2,058	.....	—775	.....	+919	.....	—144	.....
In year	—208	.....	—422	.....	—4,450	.....	—2,667	.....	—5,477	.....	—17,263	.....
In year	—5.0%	.....	—10.2%	.....	—1.8%	.....	—3.2%	.....	—10.4%	.....	—18.0%	.....

[1] All time peak. [2] Lowest since April, 1922. [3] Lowest since October, 1922, due to shutdown of six Mid-Continent States. [4] Stocks, October 11, 1941.

Markets Generally Steady Despite Rationing Plans

All products as well as crude oil are in strong demand generally, and despite the plans for national rationing of gasoline, that product is being readily absorbed by the markets.

In the East Coast district, chief interest is in fuel oils, both light and heavy. Shipments into the area are fairly satisfactory, but suppliers dispose of their receipts immediately, and cannot accumulate stocks. Heating-oil stocks are subnormal, and all the potential demands cannot be met. Deliveries of residual fuel oil into the region by tank car are fairly well in line with current requirements of the industrial consumers, but stocks are low, and possibility of shortage in coming months is recognized. Conversion of industrial plants as well as homes to substitute fuels still is being urged as the best insurance against shortage.

The Gulf Coast market remains quiet,

Petroleum Production in the United States

(Estimates compiled by The Oil Weekly. All figures indicate daily averages, in barrels)

STATE OR DISTRICT	[1]OPC Allocation in October	PRODUCTION IN WEEK ENDED Oct. 17	PRODUCTION IN WEEK ENDED Oct. 24
Arkansas	79,500	73,500	73,300
California	782,000	742,400	747,000
Long Beach	.....	34,800	34,800
Midway-Sunset	.....	56,500	55,900
Kettleman Hills	.....	37,400	38,100
Wilmington	.....	97,200	96,300
Rest of State	.....	516,500	521,900
Colorado	7,000	6,850	6,500
Illinois	280,000	257,600	264,100
Salem	.....	39,450	38,750
Louden	.....	46,150	44,600
Other New Pools	.....	160,350	169,450
Old Pools	.....	11,650	11,300
Indiana	19,000	18,000	16,500
Kansas	294,000	302,900	303,900
Kentucky	13,800	12,350	12,400
Louisiana	337,200	326,600	327,200
North	.....	97,700	97,550
South	.....	228,900	229,650
Michigan	65,700	61,850	65,750
Mississippi	50,000	69,600	69,800
Missouri	.....	130	130
Montana	24,400	21,200	22,750
Nebraska	3,500	3,150	3,300
New Mexico	101,100	100,200	100,250
New York	15,400	13,100	13,500
Ohio	11,400	9,550	9,700
Oklahoma	417,000	364,800	364,450
Oklahoma City	.....	66,150	67,400
Seminole Area	.....	88,450	87,100
Rest of State	.....	210,200	209,950
Pennsylvania	50,800	49,200	51,500
Tennessee	.....	30	30
Texas	[2]1,407,600	1,365,650	1,379,550
Upper Gulf Coast	.....	310,900	318,850
East Texas Field	.....	362,250	362,150
Rest of Eastern Texas	.....	91,300	96,800
Lower Gulf Coast	.....	98,650	98,800
Southwest Texas	.....	49,450	49,900
South Central Texas	.....	17,900	17,850
West Texas	.....	209,850	209,800
North Texas	.....	139,900	139,850
Panhandle	.....	85,450	85,550
Utah	.....	15	15
West Virginia	16,000	9,500	9,650
Wyoming	90,800	96,400	95,600
Total United States	4,066,200	3,904,575	3,936,875

[1] Production rates recommended for states by Office of Petroleum Coordinator, on basis of Bureau of Mines forecast of the nation's daily average requirements for domestic crude during month. State conservation authorities except Texas Railroad Commission have prescribed allowables calculated to hold actual production within OPC regulations. (Details on state allowable in The Oil Weekly of October 5, page 43.)

[2] In general, Texas fields will be shut down on October 3, 4, 10, 11, 17, 18, 24, 25 and 31, but the number varies in different fields.

although one refiner who had closed down his plant for lack of storage, resumed operation, with plans to continue open for at least a month. Lack of tank cars remains the cause of subnormal demand, as products could be readily sold if delivery could be made.

Transportation shortage is the principal problem in the Middle West, a particular difficulty being that of supplying local demand to increased extent by trucks instead of tank cars, which have been diverted to serving the East Coast.

Strong demand for products is reported in the upper Mid-Continent, as gasoline, kerosine, furnace oil, and other products go out in volumes as great as possible with the tank cars available. While some refiners are having difficulty filling orders because of scarcity of materials on hand, most of the plant owners could supply increased quantities if they had tank cars. An exception is the available output of heavy fuel oil, which is short of the current strong demand provided by railroads and other consumers.

In the Western Pennsylvania refining district, interest centered principally on neutral oils, which have weakened in price. The relaxation of demand for that product was ascribed partially to stocking up of buyers because of the container situation. In some cases, quotations were down 2 cents a gallon from previous lows. Other products, however, were generally strong, including bright stocks, cylinders, kerosine, and fuel oils.

WAR is making unprecedented demands upon the oil industry and banks of America. Producers, marketers, suppliers, transporters — all will find our facilities geared to the faster pace of wartimes. We stand ready to serve every branch of the industry — with least possible delay.

REPUBLIC NATIONAL BANK
OF DALLAS
MEMBER FEDERAL DEPOSIT INSURANCE CORP

ONE OF THE NATION'S 100 LARGEST BANKS

Bureau of Mines Reports On August Operations

A 279,000-barrel increase in daily oil production in August as compared with July, 3,884,800 barrels against 3,605,900 barrels, is shown by the monthly report of the Bureau of Mines despite the fact that demand for gasoline continued to decline and reached a point 21 percent below August, 1941, when crude production averaged 3,914,600 barrels daily.

The bureau pointed out that the large increase in production offset a gain in runs to stills, with the result that the total crude stock withdrawal was reduced to only about 1,000,000 barrels, compared with over 6,000,000 barrels in July.

Daily average runs to stills reached 3,682,000 barrels, the highest figure since last February but considerably below the August, 1941, average of 4,018,000 barrels. In spite of efforts to reduce gasoline yields in favor of fuel oils, the bureau said, the average again rose, from 38.6 percent in July to 39 percent in August.

The toal demand for motor fuel in August was placed by the bureau at about 51,600,000 barrels. "This substantial decline," the report commented in announcing the drop of 21 percent from last year "reflects the full effect of rationing in District 1 plus withdrawals from unreported accumulations in stocks. The trend in stocks of motor fuel nearly reached the turning point, with the result that there was virtually no change in total inventory in August, generally the month of heaviest demand. Total stocks of finished and unfinished gasoline on August 31 were 79,526,000 barrels, compared with 80,377,000 barrels a year ago."

Bureau of Labor Statistics figures placed the price index for petroleum and products at 60.7 in August, compared with 60.6 the preceding month and 61.4 in August, 1941.

Natural Gasoline Stocks Off Despite Output Gain

Production of natural gasoline and allied products continued its upward trend in August, with a daily average of 9,522,000 gallons against 9,218,000 gallons in July.

Output in East Texas, Louisiana and New Mexico reached new highs in the month, the bureau disclosed.

Production for the month included 173,082,000 gallons of natural gasoline against 170,478,000 gallons in July; 56,028,000 gallons of cycle products against 54,600,000 gallons; 9,534,000 gallons of iso-butane and natural gasoline and cycle plants against 10,080,000 gallons; 56,532,000 gallons of liquefied petroleum gases at natural gasoline and cycle plants against 50,610,000 gallons, and 18,606,000 gallons of liquefied refinery gas at refineries against 20,622,000 gallons.

Stocks at the close of the month totaled 276,948,000 gallons, a drop from 284,466,000 gallons August 1, and included 235,242,000 gallons of natural gasoline, 13,692,000 gallons of cycle products, 20,076,000 gallons of liquefied petroleum gases and 7,938,000 gallons of liquefied refinery gases. By location, stocks dropped from 120,456,000 to 119,742,000 gallons at refineries and from 156,240,000 to 149,268,000 gallons at plants and terminals.

U. S. Field Operations

Illinois Basin

Good Well Completed In Covington Pool

Large well completed in Covington pool of Wayne County. Important St. Clair County wildcat abandoned. White County wildcat drilling ahead after finding show of oil in Tar Springs sand.

Wayne County: Largest well of the week is Deep Rock's Cravens 1, southeast outpost in the Covington field, which flowed 1978 barrels of oil in 24 hours following an acid treatment of 3000 gallons in McClosky lime at about 3214-25 ft.

St. Clair County: Mid-Sun Oil Corp.'s Schneppe Community 1, SW NE 5-1n-8w, three miles northwest of Belleville in wildcat territory, one of the most closely watched tests in the state recently, has been abandoned at 2001 ft with no shows reported.

White County: Yingling & Capshaw's Myers 2, NE SE SW 12-6s-10e, north of the Rising Sun pool and 6 miles southeast of Carmi, drilling at 2420 ft, is nearing Cypress sand, after finding saturation in Tar Springs sand at 2205-20. On a 45-minute drill stem-test, 2100 ft of fluid were recovered.

Newest producer in the field just west of Grayville is Skelly's Stella Fearn 2, NE SE SW 20-3s-14w, initialed at 69 bbls of oil in 9 hrs from Biehl sand at 1881-90 ft.

Kentucky

Henderson County: W. F. Lacy's Cavenaugh 1, SW SE SW 20-Q-21, 2½ miles northeast of Smith Mills pool, was dry at 2320 ft. Surface elevation 361 ft, Lower Glan Dean was topped at 1972 ft, Golconda 2130 ft; Cypress sand at 2287-2320 ft was hard and shaly.

Union County: Sun Oil Co.'s Highland Creek 1, SW 16-P-20, pool-opener ½ mile east of Uniontown, swabbed 750 bbls of oil a day after 40-quart shot in Waltersburg at 1820-54 ft, td 2653 ft.

J. Brueil-J. Lindas' R. T. Wathen 1, SW NE SE 10-O-19, on pumping test made 60 bbls of oil in 24 hours, and no water, after 3000 gallons of acid in the Lower O'Hara at 2560-64 ft.

ILLINOIS FIELD COMPLETIONS

Clinton County: E. Frank Jones' Harrison 2, c se nw 2-2n-2w, Dev 2663-70 ft, 341 bbls, 2670 ft.

Fayette County: Carter's Rhedemeyer 1, c ne se ne 3-8n-3e, Weller 1500-22 ft, Ben 1602-1614 ft, 396 bbls, 1640 ft.

Carter's Lilly 1, c se sw se 9-8n-3e, abnd 1525 ft.

Carter's Holman 3-D, c ne ne 10-8n-3e, Dev. 3123-26 ft, 109 bbls, 3126 ft.

Carter's R. Larimore 12-D, c nw sw 11-8n-3e, Dev 3127-3131 ft, 125 bbls, 3131 ft.

Franklin County: E. S. Adkins' McKemie 6, nw nw nw 30-6s-3e, Pay 2162-89 ft, 100 bbls, 2189 ft.

Hamilton County: Pure's Phillips A-2, se nw nw 6-6s-7e, AV 2995-3017 ft, 149 bbls, 3020 ft.

Jasper County: Aetna Oil Co.'s S. Ochs 1, e½ w½ nw ne 8-5n-14w, McC 2827-34 ft, 80 bbls, 2876 ft.

Pure's George Resch 1, c se sw 17-6n-10e, McC 2838-52 ft, 99 bbls, 2865 ft.

Pure's Armistead Cons. B-1, c nw nw 20-6n-10e, McC 2850-53; 2855-68 ft, 1064 bbls, 2880 ft.

Jefferson County: Carter's Cobb 3, c se nw sw 10-1s-2e, Ben 1944-47 ft, 11 bbls, 1947 ft.

Results on Industry's Prospecting Fronts

Wildcats reported completed during the last week jumped to 83, and 15 of them were oil producers. This brings total for the year to 2556 wildcats completed, of which 328 have produced oil.

Oklahoma: Second well showing in Wilcox at Liberty.

Kansas: Stafford County well showing at two levels.

North Louisiana: Gas field opened in Concordia.

Michigan: Missaukee County wildcat cores three possible pays.

North and West Texas: Showing in wildcats are encouraging.

Magnolia's Johnson 1, c n½ ne se 1-3s-4e, abnd 3192 ft.

Jersey County: C. R. Craft's Matheney 1, s½ se ne 19-8n-13w, Penn sd 1165-79 ft, 8 bbls, 1179 ft.

Lawrence County: W. M. Ballor's Hershey 1, c ne nw 35-2n-12w, abnd 2182 ft.

Marion County: Cameron Bros.' C. O. Hill 1, c sw sw ne 14-3n-1e, abnd 1831 ft.

Richland County: I. W. Siegel's Weesner 1, c se sw 17-2n-14w, Pay 3169-73 ft; McC 140 bbls, 3176 ft.

Pure's Coen 31, c ne se 4-3n-9e, Weller 2588-2592 ft, pb 2622 ft, 228 bbls, 2640 ft.

Pure's Coen 29, c se nw 9-3n-9e, Weller 2596-2600 ft, pb 2606 ft, 18 bbls, 2650 ft.

Pure's Hays 1, c ne se 22-4n-9e, Weller 2596-2606, 16 bbls, 3015 ft.

Wabash County: Horton & Wiggins' M. B. Carson 2, se sw se 16-1s-12w, Cyp 1976-97 ft, 124 bbls, 2325 ft.

Seaboard et al's Guisewite 3, sw nw nw ne 21-1s-12w, Weller 1970 ft, 94 bbls, 1989 ft.

Washington County: Magnolia's Koelling 4, c se se ne 15-1s-1w, Bethel 1523 ft, 97 bbls, 1539 ft.

H. Hubbard et al's Dennis 1, sw nw se 14-3s-3w, Bethel 1264-1274 ft, 10 bbls, 1279 ft.

Wayne County: Pure's Shelton 1, 150 ft s of c nw se 35-1n-8e, McC 3085-87 ft, 465 bbls, 3125 ft.

Ohio's Weaver 1, ne sw sw 13-1s-7e, AV 3072-88 ft, 97 bbls, 3089 ft.

Pure's Blackburn B-1, 150 ft e of c ne 2-1s-8e, McC 3078-80 ft; 3083-87 ft; 3095-3104 ft, 450 bbls, 3105 ft.

Texas Co.'s Galligar 1, c se se 2-2s-7e, L. O'Hara 3255-63 ft, Ros 3271-78 ft, McC 3295-3304 ft, 101 bbls, 3307 ft.

White County: Superior's Fitton 40, c ne sw sw 14-4s-14w, Tar Spgs 2216-2244 ft, 347 bbls, 2245 ft.

Jarvis & Marcell's Spencer Comm. 2, se sw sw 31-4s-11e, Tar Spgs 2310-31 ft, 462 bbls, 2331 ft.

Mid States Oil Co.'s Hansman 1, se sw nw 8-4s-10e, abnd 3262 ft.

Continental's Brown 1, ne ne sw 25-5s-10e, McC 3022-27 ft, 52 bbls, 3107 ft.

Magnolia's Gen. Amer. Life 7, ne sw sw 1-7s-8e, Walt 2209 ft, 76 bbls, 2220 ft.

Carter's Hamilton 8, c sw se 2-7s-8e, AV 2895-2959 ft, 56 bbls, 2959 ft.

Carter's Blades 1, nw ne se 15-7s-8e, abnd 2545 ft.

ILLINOIS WILDCAT COMPLETIONS

Alexander County—Failure: Whitehead & Kippings' R. W. Menton 1, sw sw se 4-15s-3w, abnd 609 ft.

Clinton County—Failure: Wiser Oil Co.'s Mahlandt 1, c nw nw ne 31-3n-2w, abnd 1398 ft.

Effingham County—Failure: Papoose Oil Co.'s Yinst 1, c nw ne sw 12-6n-4e, abnd 2460 ft.

A. H. Gibson et al's Brummer 1, c ne sw 2-6n-5e, abnd 2523 ft.

Franklin County—Failure: National Pet. Co.'s Anderson 1, c se sw 18-5s-4e, abnd 2512 ft.

Jasper County—New Field: Helmerich & Payne et al's Bessie 1, c se nw se 23-5n-10e, O'Hara 2940-47 ft, 316 bbls oil, 300 wtr, 3065 ft.

Jefferson County—Failure: R. Finn et al's Hawkins 1, ne sw nw 5-1s-3e, abnd 2598 ft.

Marion County—Failure: Ohio's Jones 1, c ne ne se 31-4n-4e, abnd 2460 ft.

Richland County—New Field: C nw ne nw

U. S. Drilling Operations in Week Ended October 24, 1942

STATE	ALL WELLS COMPLETED — THIS WEEK Total	Oil	Gas	Dry	†Miscel.	Total 1942	Total this Date 1941	‡WILDCATS COMPLETED — THIS WEEK Total	Oil	Gas	Dry	Distillate	Total 1942
Alabama	....	....	....	....	....	3	4	....	....	....	....	....	3
Arizona	....	....	....	....	....	2	....	....	....	....	—	....	2
Arkansas	2	2	....	....	....	113	155	....	....	....	....	....	18
California	23	20	....	3	....	611	928	3	....	....	3	....	97
Colorado	2	....	....	2	....	14	15	2	....	....	2	....	2
Florida	....	....	....	....	....	....	1	....	....	....	....	....	....
Georgia	....	....	....	....	....	2	1	....	....	....	....	....	2
Illinois	44	30	....	14	....	1,739	3,219	10	2	....	8	....	484
Indiana	7	1	....	5	1	323	440	1	....	....	1	....	83
Iowa	....	....	....	....	....	....	5	....	....	....	....	....	....
Kansas	41	17	2	22	....	1,360	1,869	18	3	1	14	....	308
Kentucky	5	4	....	1	....	127	267	....	....	....	....	....	32
Louisiana	12	6	1	5	....	786	1,281	3	....	....	3	....	124
Michigan	16	8	2	6	....	574	693	7	3	....	4	....	152
Mississippi	....	....	....	....	....	91	175	....	....	....	....	....	33
Missouri	....	....	....	....	....	24	65	....	....	....	....	....	....
Montana	11	9	1	1	....	174	180	2	2	....	....	....	2
Nebraska	....	....	....	....	....	28	76	....	....	....	....	....	14
New Mexico	2	2	....	....	....	330	317	....	....	....	....	....	37
New York	24	15	....	....	9	1,012	818	....	....	....	....	....	1
Ohio	20	4	10	6	....	913	1,449	....	....	....	....	....	....
Oklahoma	34	13	1	17	3	1,191	1,826	12	1	....	11	....	255
Pennsylvania	48	43	3	1	1	3,212	3,321	....	....	....	....	....	....
Tennessee	....	....	....	....	....	8	19	....	....	....	....	....	....
Texas	83	49	....	30	4	4,543	8,578	24	3	....	21	....	903
Utah	....	....	....	....	....	....	3	....	....	....	....	....	....
Virginia	....	....	....	....	....	1	....	....	....	....	....	....	....
West Virginia	12	2	9	1	....	610	597	....	....	....	....	....	....
Wyoming	8	7	....	1	....	86	114	1	1	....	....	....	4
Total this week	394	232	29	115	18	17,877	26,416	83	15	1	67	....	2,556
Total last week	347	199	36	94	18	17,483	25,719	56	10	3	43	....	2,473
Total this year	17,877	9,272	1,533	4,678	2,394	.....	.....	2,556	328	41	2,179	8	....

† Includes old wells deepened, water intake, gas input, salt water disposal, and distillate wells.
‡ OPC program calls for 4,000 wildcats in 1942, of which 624 should produce oil and 116 gas, leaving 3,260 dry.

24-3n-11w, McC 1837 ft, 8 bbls oil, 20 wtr, 1843 ft.

St. Clair County—Failure: A. L. Williams' Pieper 1, c sw nw nw 35-1s-6w, abnd 987 ft.

ILLINOIS WILDCAT STARTS

Clay County: National Pet. Co.'s J. Smith 1, ne se nw 23-5n-5e, lcn.

Clinton County: E. Corliss' D. Clark 1, nw se se 17-1n-3w, lcn.

H. L. Whittaker's Gullic 1, sw sw ne 28-2n-1w, lcn.

Knox County: St. Anne Pet. Co.'s Cote 1, nw nw ne 2-29n-12w, dr.

Marion County: Ben J. Taylor's Garrett 1, c ne ne 24-4n-2e, lcn.

St. Clair County: V. J. Nolen's Schoene 1, se se sw 26-2n-6w, lcn.

Wabash County: W. E. Bailor's Liddle 2, sw nw sw 26-1n-13w, drlg.

White County: Jarvis Bros. & Marcell's Williams 1, nw ne ne 6-5s-10e, lcn.

ILLINOIS OLD WELL DEEPENED

Madison County: C. S. Beck's Leef 1, ne nw se 5-5n-5w, lcn.

INDIANA FIELD COMPLETIONS

Gibson County: R. D. Brown, Inc.'s Morrow-Lehman Com. 1, sw nw ne 36-1s-10w, abnd 1623 ft.

Posey County: A. B. Speak's Allyn 1, ne ne se 24-6s-13w, abnd 400 ft.

John Lindas' Ed Seifert 1, sw nw ne 30-6s-12w, Mansfield 1124-52 ft, 30 bbls oil, 1152 ft.

Cherry & Kidd's Koch-Husband Com. 1, se sw sw 8-7s-14w, abnd 2944 ft.

Sullivan County: Burr Lambert et al's Ellery Hayden 1, c ne nw 10-8n-10w, abnd 2457 ft.

OLD WELL DEEPENED

Gibson County: R. D. Brown, Inc.'s Coleman 1, sw ne nw 1-2s-10w, otd 1385 ft, abnd 1781 ft.

INDIANA WILDCAT COMPLETION

Vanderburg County—Failure: T. W. Drake's L. Nurrenbern 2, sw se ne ne 6-7s-11w, abnd 1880 ft.

INDIANA WILDCAT STARTS

Gibson County: R. D. Brown, Inc.'s J. F. Lehman 4, se sw ne 36-1s-10w, lcn.

R. D. Brown, Inc.'s Lehman 5, nw se nw 36-1s-10w, lcn.

KENTUCKY WILDCAT START

Butler County: Ohio's Sheppard 1, 3-I-36, lcn.

KENTUCKY FIELD COMPLETIONS

Daviess County: Farmer et al's Bolton 1, 16-N-30, T.S. 968-978 ft, 12 bbls, 978 ft.

Henderson County: Ky. Nat. Gas' F. Dempewolf 1, 19-P-27, Pales 1043-62 ft, 9 bbls, 1555 ft.

Cherry & Kidd's C. D. Burbank 2, 24-Q-21, Cyp 2300 ft, 844 bbls, 2311 ft.

Union County: Phillips' ,Kington Coal 1, 1-O-19, McC 2602-10 ft, 13 bbls, 2675 ft.

Basin Drlg's Riley Comm. 2, 20-O-18, abnd 1010 ft.

Oklahoma

Second Well Showing In Wilcox at Liberty

Second Wilcox sand well for Liberty Building lime to Okfuskee discovery. Wilcox wildcat try in Seminole.

Noble County: Deep Rock Oil Corp.'s Dailey 1, SE NW NE 10-22-2e, may be a second Wilcox sand producer in Liberty. Hole was drilled to 4360 ft in the top of second Wilcox and swabbing showed 170 bbls of fluid, mostly oil, with water decreasing after 12 hrs. Casing was run to 4359 ft and bailing was underway.

Okfuskee County: Mid-Continent Petroleum Corp.'s Reed 1, NW NW SE 30-12-7e, pool opener in Hunton lime at 4250 ft, has not yet received complete test and is waiting on connection with pipe line now completing.

Seminole County: Sinclair Prairie has staked Jennings 1, C SW SE 8-8n-8e, a wildcat scheduled for Wilcox sand at an estimated depth of 4400 ft.

OKLAHOMA FIELD COMPLETIONS

Creek County—N. Bristow: T. C. Greer's Dressler 3, sw ne se 16-17n-8e, Prue 2310 ft, shot 40 qts 2310-22 ft, pump 25 bbls, 2330 ft.

Creek County—Glen: Sinclair-Prairie's Kiefer 46, sw se se 16-17n-12e, Glenn 1415 ft, 1433 ft.

Hughes County — Buchner: Barnsdall's Mount 1, ne ne ne 2-8n-8e, 2nd Wilcox 4332 ft, abnd 4343 ft.

Kay County — Vernon: Seiboldt's School Land 1, c s½ nw sw 16-29n-1e, Oswego 3130-3274 ft, shot 40 qts 3410-50 ft, pump 51 bbls 21 hrs, 3473 ft.

Lincoln County—N. Agra: Danciger O&G's Scott 1, se nw nw 31-17n-4e, Cleveland 3141 ft, pump 80 bbls, 3178 ft.

Logan County—Crescent: Davon Oil Co.'s Good 1, sw ne nw 27-17n-4w, Layton 4925 ft, pump 75 bbls, 4979 ft.

Marshall County—Cumberland: Pure's Gen. Amer. Life 112, se nw sw 20-5s-7e, McL 5562 ft, flow 153 bbls 4 hrs, gravity 34.2, 6016 ft.

Pure's Stewart 113 1, c se ne nw 33-5s-7e, abnd 6323 ft.

Marshall County—Isom Springs: E. L. Gill's Adams 5, ne se ne 6-8s-6e, pump 15 bbls oil, 5 wtr, 505 ft.

Okfuskee County—W. Okemah: Barrett & Selby's Bean 1, ne ne ne 19-11n-9e, Cromwell 3391 ft, abnd 3430 ft.

Okfuskee County—Sheldon: R. Viersen's Rentie 2, nw ne se 24-12n-11e, Sylvan 3360 ft, abnd 3510 ft.

Okmulgee County—Brinton: E. Walker's Reynolds 1-A, nw sw sw 16-13n-12e, pump 2 bbls, 2047 ft.

Osage County—Osage City: T. G. Loney's Osage 2, ne se se 20-21n-9e, Miss 2607 ft, abnd 2637 ft.

Pawnee County—E. Watchorn: Alma Oil Co.'s Traver 1, sw nw sw 25-23n-3e, Wx 3971 ft, flow 300 bbls, 3982 ft.

Alma's Brown 1, c nw ne 26-23n-3e, Wx 3981 ft, flow 215 bbls, 3985 ft.

Pottawatomie County—Center Point: C. W. Sharp's Williams 1, c ne se 1-9n-2e, Earlsboro 4890 ft, pb 5010 ft, pay 4990-5000 ft, perf csg, flow 40 bbls oil, 25 wtr, 5916 ft.

C. W. Sharp's Brundage 1, ne ne ne 12-9n-2e, top sd 5035 ft, perf csg, pb to 5120 ft, 6 mcfg 24 hrs, spray 2 bbls oil 2 bbls wtr 24 hrs, 5843 ft.

Norbla et al's Wagoner 1, c sw sw 6-9n-3e, Earlsboro 4303 ft, pb 5049 ft, perf csg, flow 35 bbls, 5790 ft.

Sequoyah County—Unnamed: Western Okla. Gas' Moore Unit 1, c w½ sw sw 17-10n-26e, sand 1795-2025 ft, 700,000 gas, 1475 ft.

Stephens County—Sholem Alechem: L. W. Winkler & Sons' Brown 1, c se ne ne 3-2s-5w, abnd 2685 ft.

OKLAHOMA OLD WELLS DEEPENED

Okfuskee County—Lyons-Quinn: Bennett's Barnett B 1-A, c sl ne nw 25-11n-11e, otd 1985 ft, Deaner 2351 ft, shot 20 qts, pump 8 bbls oil 10 bbls wtr, 2364 ft.

Okfuskee County — Sheldon: Morton & Brown's Hall 1-A, nw nw se 21-12n-11e, otd 2585 ft, 2nd Dutcher 2637-45 ft, hfw, abnd 2647 ft.

Oklahoma County—Jones: Phillips' Wes Paco 2, c w½ sw se 34-12n-3w, otd 6529 ft, Wx 6328-6483 ft shot 240 qts 6412-83 ft, pump 179 bbls oil, 15 wtr, 6483 ft.

OKLAHOMA WILDCAT COMPLETIONS

Cleveland County—Failure: Monarch Royalty Co.'s Schultz 1, c ne ne 5-10n-1w, temp. abnd.

Creek County—Failure: E. R. Black's Smith 14, c n½ n½ se 13-14n-10e, Dutcher 2563-94 ft, abnd 2588 ft.

Harmon County—Failure: Gulf's Chaffin 1, c sw sw 25-1n-25w, spd, Panhandle lm 2690 ft, Pontotoc 3245 ft, dry wash 3280-95 ft, Canyon 4115 ft, lime 4975-5102 ft, dry sd 5695-5720 ft, dry granite wash 5785-95 ft, lime 5805-25 ft, dry sd 7120-40 ft, abnd 7523 ft.

Okfuskee County—Failure: Newton Barrett, Inc.'s Bean 1, ne ne ne 19-11n-9e, Calvin 1568 ft, Booch 3034 ft, Wapa 3363 ft, Crom 3391-3426 ft, abnd 3430 ft.

Oklahoma County—Failure: Chillicothe et al's Chitwood 1, ne sw sw 6-13n-1w, temp abnd 750 ft.

Sunray's Armstrong 1, sw se nw 6-13n-1e, Paw 2250 ft, Avant Dewey 3715 ft, Hogs 4195 ft, sd 4740 ft, Col. lm 4813 ft, Big lm 5030 ft, Bart 5354-95 ft, nso, Uncon. zone 5451 ft, Wood 5460 ft, Mise 5521 ft, Hunton 5524 ft, 2nd Wx 5889 ft, abnd 5889 ft.

Pawnee County—Failure: Lastecas' Baker 1, ne sw se 9-20n-5e, Avant 1500 ft, Dewey 1590 ft, Osw 3030 ft, Bart 3456 ft, Miss 3655-3812 ft, Viola 3846 ft, Dolo 3852 ft, sdy dolo 3879 ft, 2d Wx 3976 ft, abnd 3976 ft.

Pottawatomie County—New Field: C. J. Bucy et al's Reed 1, ne ne sw 20-8n-4e, Paw 1307 ft, Belle City 2078 ft, L. Belle City 2225 ft, Hogs 2637 ft, Ccb 3028 ft, Senora 3752 ft, brn lm 4150 ft, Mayes 4177 ft, Wood 4253 ft, Hunton 4411 ft, Syl 4505 ft, Viola 4583 ft, sso, Dense 4637 ft, Dolo 4680 ft, 2nd Wx 4837 ft, pb 4471 ft, perf 4456-60 ft, 15 bbls oil, 15 wtr, 4866 ft.

Pottawatomie County — Failure: J. F. Smith's Dierker 1, c sw sw 19-9n-2e, spd, temp abnd 130 ft.

Tillman County—Failure: Harper & Knappenberger's Walker 1, c sw sw sw 6-2s-14w, Arb 2380 ft, abnd 2480 ft.

OKLAHOMA WILDCAT STARTS

Greer County: Lloyd Noble's Harron 1, c nw nw 11-4n-24w, lcn.

Jackson County: Lloyd Noble's Mayrhofen 1, c ne sw 32-2n-23w, lcn.

Murray County: Rodgers Bros.' Vanderslize 2, c nw se 25-2n-2e, dk.

Noble County: Ingling & Parker's Rosecrants 1, nw nw se 14-24n-1e, c&p.

Kansas

Stafford County Well Has Two Shows to Test

Testing wildcat near Seward. Chat pays off northeast of Zenith. Third well starting for new McPherson field.

Stafford County: J. W. McMorrow and Vickers Petroleum Corp.'s Curtis 1, SW NW 6-22-13w, is testing Arbuckle at 3693-3699 ft. Some oil was showing when the pay was drilled. A core taken in Kansas City-Lansing also showed saturation, which is to be tested if Arbuckle fails to produce.

Reno County: Mississippi chat production in a well at the northeast edge of Zenith now productive from Misener sand and Viola lime, seems to be assured at Auto Ordnance's Volker 1, SW SW 6-24-10w. Casing is being run to 3718 ft above good saturation drilled to 3731 ft. Well may provide new pay to Zenith with possibility of extending the chat area also into the adjacent Peace Creek sector.

McPherson County: Cities Service Oil Co.'s Robinson 1, CS½ NW NE 31-17-1w, is a new offset to Westgate-Greenland Oil Co.'s Lilly 1, pool opener in the chat with top at 2656 ft. A previous offset is drilling.

KANSAS FIELD COMPLETIONS

Barton County—Kraft Prusa: Skelly's Heller 2, ne nw se 22-17s-11w, Arb 3286 ft, 2500 gals acid, 1750 jet acid, pump 195 bbls, 3313 ft.

Barton County—Silica: Mid-Continent's A. Matzek 10, c n½ ne se 25-19s-11w, Arb 3292 ft, perf 20 holes 3292-95 ft, pump 95 bbls oil, 15 wtr, 3311 ft.

Butler County—S. Augusta: S. L. Skaer et al's Cunningham 1, c n½ ne se 16-28s-4e, Kansas City 2022 ft, abnd 2072 ft.

Butler County—Ferrell: Adair-Morton's Nelson 1, c ne se 20-28s-8e, mim, abnd.

Cowley County — Couch: Adair - Morton's Kennedy 2, ne sw sw 12-30s-5e, Bart 2805 ft, pay 2810-16 ft, shot 70 qts, pump 279 bbls, 2816 ft.

Cowley County—Gibson: Sinclair Prairie's Wilson 2, nw nw sw 29-34s-3e, Miss 3402 ft, abnd 3468 ft.

Ellsworth County — Wilkens: Mid - Plains' Alben 3, c nw se 32-17s-9w, Arb 3226 ft, 2000 gals acid, pump 169 bbls, 3238 ft.

Jefferson County—McLouth: V-8 Drilling Co.'s Makewski 1, c nw sw 17-9s-20e, McL sd 1460-85 ft, abnd 1605 ft.

E. V. Jackson et al's McLouth Bank 3, c sw nw 20-9s-20e, Miss 1482 ft, abnd 1487 ft.

Hatcher & Fisk's Hesse 2, c nw sw 21-9s-20e, McL 1445 ft, pay 1558-60 ft, 12 mcfg, 1460 ft.

McPherson County—Lindsborg: Mabee O & G's Johnson 1, c w½ se sw 6-17s-3w, Viola 3399 ft, pb 3418 ft, 1500 gals acid, pump 308 bbls oil, 5 wtr, 3421 ft.

M & L Oil's Hoglund 2, c w½ se nw 8-17s-3w, Simp 3450 ft, swab 1357 bbls, 3460 ft.

Auto Ordnance's Melander 1, c sw nw 9-17s-3w, Simp 3464 ft, abnd 3466 ft.

Phillips County—Dayton: Tom Allen et al's Klotz 1, c nw sw 1-3s-19w, Kansas City 3156 ft, pay 3156-61 ft; 3196-99 ft; 3211-14 ft, 7000 gals acid, pump 435 bbls, 3220 ft.

Tom Allen's Eltiste 1, c ne se 2-3s-19w, Lans 3130 ft, pay 3236-50 ft; pay 3320-30 ft, 1000 gals acid, pay 3200-14 ft; 3181-88 ft; 3129-36 ft, 2000 gals acid, rip csg, pump 422 bbls, 3345 ft.

Pratt County—Iuka: Skelly's Beck 2, sw sw nw 7-27s-12w, Simp 4235 ft, perf csg, 500 gals acid, flow 1238 bbls, 4274 ft.

Reno County—Peace Creek: Cities Service's Endicott 1, c ne sw 14-23s-10w, Viola 3762 ft, 300 gals acid, flow 2940 bbls oil, 60 bbls wtr, 3775 ft.

Derby Oil Co.'s Mathes 3, c ne se 16-23s-10w, Viola 3733 ft, 1000 gals jet acid, 3000 gals acid, flow 250 bbls, 3756 ft.

Rice County—Chase: Bay Pet's Gardner-Smith 1, c ne ne 7-19s-9w, Simp shale 3274 ft, abnd 3295 ft.

Skelly's Grizell 2, sw se nw 9-19s-9w, Lans 2872 ft, abnd 3243 ft.

Rooks County—Layton: Max Cohen's Doane 2, sw sw se 34-8s-16w, Lans 3056 ft, pay 3112-16; 3098-3102; 3126-28 ft; 3135-40 ft, 8000 gals acid, pump 371 bbls, 3147 ft.

Russell County—Gorham: Harry Gore and N. Appleman's Roubach 1, c e½ ne ne 16-14s-15w, Lans 3011 ft, pay 3030 ft, 500 gals acid, pump 545 bbls, 3044 ft.

Russell County—Karst: Derby's Karst 2, c

e½ ne ne 27-15s-14w, Arb 3350 ft, 3000 gals acid, pump 46 bbls, 3357 ft.

KANSAS WILDCAT COMPLETIONS

Barber County—Failure: Great Lakes Carbon's Werner 1, c se se 20-30s-14w, Anhy 750 ft, Ft. Riley 2300 ft, Florence 2400 ft, Topeka 3170 ft, wtr zone 3252-57 ft, sso 3415-25 ft, Lans 3993 ft, Viola 4486 ft, Simp 4572 ft, sso 4572-93 ft, Arb 4676 ft, abnd 4702 ft.

Champlin et al's Ewers 1, sw sw sw 7-32s-14w, Ft. Riley 2425 ft, Topeka 3285 ft, Lans 4200 ft, Miss 4715 ft, Viola 4917 ft, Simp sd 4991 ft, stain 4991-94 ft, Simp 4991 ft, Arb 5137 ft, sso, 15 bbls oil 74 bbls wtr, gravity 28, abnd 5174 ft.

Cowley County — Failure: Cities Service's Stout 1, sw ne ne 9-31s-6e, Topeka 1092 ft, Oread 1390 ft, KC 2187 ft, sso 2370-76 ft, Miss 2887 ft, Arb 3323 ft, abnd 3395 ft.

Edwards County — Failure: Fain Drlg's Roenbaugh 1, se nw nw 22-26s-17w, abnd 30 ft.

Ellis County—Failure: Herndon Drlg's Anton Schmeidler 1, se se sw 16-12s-17w, Tarkio 2900 ft, Neva 2610 ft, Topeka 3200 ft, Lans 3455 ft, sso 3526-29 ft, Congl 3711 ft, Arb 3920 ft, abnd 3988 ft.

Jefferson County — Failure: McLaughlin's White 1, c ne se 8-11s-20e, Miss 1498 ft, wtr 1590-95 ft, abnd 1665 ft.

McPherson County—New Field: Westgate-Greenland's Lilly 1, c s½ sw se 30-17s-1w, Lans 2090 ft, Miss 2658 ft, pump 3000 bbls, 2670 ft.

Pawnee County—Failure: Stanolind's 6 McCambridge 1, sw sw sw 20-22s-19w, Anhy 1267 ft, Lans 3817 ft, Congl 4361 ft, Miss 4455 ft, Simp 4690 ft, Arb 4740 ft, abnd 5365 ft.

Rooks County— New Field: Continental's Berry 1, ne ne ne 11-9s-19w, Anhy 1392 ft, Topeka 2950 ft, Lans 3190 ft, Arb 3431-56 ft, 3000 bbls, 28.4-gr, 3456 ft.

Russell County — Failure: Black-Marshall Oil Co.'s Fairchild 1-A, ne ne nw 36-12s-13w, Anhy 557 ft, Congl 3155 ft, Topeka 2430 ft, Lans 2790, Base KC 3090 ft, Viola 3250 ft, Simp shale 3311 ft, Simp dolo 3320 ft, abnd 3375 ft.

KANSAS WILDCAT STARTS

Cowley County: Zephyr Drlg's Stout 1, nw nw sw 20-33s-5e, cellar.

McPherson County: Derby's Johnson 1, c s½ sw se 35-17s-2w, brr.

Norton County: Cities Service's Business Men's Assn. 1, ne ne nw 6-5s-22w, mim.

Rooks County: Helmerich & Payne's Coulter 1, nw nw sw 14-9s-20w, lcn.

New Mexico

NEW MEXICO FIELD COMPLETIONS

Eddy County: Acrey & Acrey's State 2, 36-17s-27e, abnd 592 ft.

Bassett & Birney's Dunn 1, ne ne se 7-18s-29e, flow 48 bbls 2-in, shot 720 qts 2410-2630 ft, td 2665 ft.

Wm. P. Dooley et al's State-Ramafo 4, 36-17s-27e, pump 40 bbls, acid 3000 gals 503-41 ft.

NEW MEXICO WILDCAT START

De Baca County: South Basin Oil Co.'s Good 1, 330 ft from e and 661 ft from n lines 5-4n-20e, mim 6000-ft test.

West Texas

Crane Ordovician Showing Encourages More Trying

Southeastern Crane County Ordovician prospect yields sufficient oil to warrant followup development. Shallowest of trio of probable oil horizons uncovered by Monahans pool discovery confirmed by offset. Wildcat between West Fuhrman and West Andrews fields makes pumper.

Crane County: Skelly Oil Co.'s Richardson 1, 7 miles north by west of Wentz pool, nearest Ordovician production, swabbed a small volume of oil with rotary fluid after using 1000 gallons of acid in Ellenburger, and was awaiting results of second treatment with 1500 gallons. This wildcat established sulphur water zone in drilling to 5743 ft, elevation 2341 ft, then cemented 5½-in to try for completion. Geological markers have not been made public. Although considerable Simpson was logged, it did not carry porosity, or saturation, according to reports. In view of the comparatively shallow depth of the Ordovician recorded by this test, renewed interest has been given deep production possibilities of the nearby McCamey field, where Texas Pacific Coal & Oil Company recently completed Lane 52-A with 9⅝-in pipe below pay zone at 2151 ft, then perforated for a pumper at 1960-2070 ft, and may later make a deep test.

Ward County: Shell's Sealy-Smith 2, 1476 ft west by north of its Monahans pool 10,082-10,364-ft Ellenburger discovery, was running pipe to complete in Tubb zone of Clear Fork after establishing water table at 5665-5741 ft, elevation 2929 ft. Drill-stem test at 5495-5555 ft yielded prolific gas, and the well flowed at rate of 25 bbls 34-gr oil hourly when tester was used at 5595-5655 ft. The discovery entered Clear Fork at 5475 ft, and passed up gas and oil production in the 5500-5700-ft lime, and promising production in the Silurian at 8250-8360 ft.

Pecos County: Magnolia's Robertson 1, situated on the east rim of the Delaware Basin, developed hole full of salt water after drilling plugs from 7-in at 6475 ft to 6495 ft, with hole bottomed at 6561 ft, and will attempt to squeeze off water to continue to Ordovician. This wildcat indicated possible gas production from the equivalent of San Angelo, or Glorietta, in Permian.

Phillips Petroleum Co.'s Price 1, 28 miles southeast of Fort Stockton, was drilling shale at 5690 ft on 8500-ft contract.

Pure's Odneal 1, south offset to its Chancellor pool oil discovery, was drilling at 5275 ft in Delaware sand, topped at 5268 ft, elevation 3291 ft.

WEST TEXAS FIELD COMPLETIONS

Andrews County—Emma: Sinclair Prairie's Cowden 18, 1677 ft from e and 4950 ft from s lines T&P 12, blk 44, flow 1216 bbls, 2-in, acid 2000 gals, 4210-4300 ft.

Andrews County—Fullerton: Fullerton Oil Co.'s Wilson 2-A, c se ne PSL 16, blk A-32, flow 992 bbls, ½-in, acid 20,000 gals, Clear Fork 6729-7170 ft.

Andrews County—North Cowden: T. P. Coal & Oil Co.'s Holt 5, acct 2, c sw nw TP 9, blk 43, T-1-N, flow 334 bbls 2-in, shot 570 qts 4525-4645 ft, td 4658 ft.

Cochran County—Slaughter: Anderson-Prichard's Neal 8, 4128 ft from e and 440 ft from n lines lse, leag 57, Refugio CSL, flow 346 bbls cas, acid 10,000 gals; shot 50 qts 4986-96 ft.

Crane County—Sand Hills Deep: Gulf et al's Tubb 7-B, c nw se PSL 28, Blk B-27, flow 7638 bbls, 2% water, acid 5000 gals, Ellenburger 5643-76 ft.

Crockett County—Soma-Noelke: A. J. Rife et al's Thompson 3, 2000 ft from s and 730 ft from e lines sec 58, blk GG, T. C. Ry-B. Ingram sur, elev 2804 ft, flow 2148 bbls 36-gr, 2-in, Yates 1535-36 ft.

Crockett County — World - Powell: Shell's Powell 2, 440 ft out nwc n½ sw¼ GC&SF 63, blk BB, pump 30 bbls oil, 16 water, acid 3080 gals 2670-86 ft, td 2702 ft.

Ector County—Foster: Richmond Drl. Co.'s Johnson 1, 1264 ft from n and 1055 ft from w lines T&P 32, blk 42, T-2-S, pump 420 bbls, shot 550 qts 4290-4455 ft, td 4473 ft.

Gaines County — Wasson: Continental & Amon Carter's Wasson 16-48, 800 ft from s and 1980 ft from w PSL 48, blk AX, flow 927 bbls, 2-in, acid 12,000 gals 4890-4960 ft.

Honolulu's Brown 2, c se sw PSL 39, blk AX, flow 640 bbls, 2-in, acid 12,500 gals 4954-5029 ft.

Hockley County—Slaughter: T. F. Morrow et al's Mallet 9, 580 ft out swc lab 21, leag 48, Edwards CSL, flow 717 bbls cas, acid 2000 gals 4922-77 ft.

Western States Gasoline Corp.'s Mallet 19-B, 510 ft out sec lab 21, leag 47, Scurry CSL, flow 886 bbls, acid 11,000 gals 4950-98 ft.

Pecos County—Taylor-Link: J. D. Lancaster et al's University-Shell 1-C, c sw sw sec 28, blk 16, flow 134 bbls, ¾-in, shot 80 qts 1447-76 ft.

Ward County—Pecos Valley: T. E. Jamison-Chas. Pollard's White 3, 330 ft from nw and ne lines lot 9, H&TC 36, blk 1, flow 148 bbls 12/64-in, natural, 1920-57 ft.

Yoakum County — Wasson: American Liberty's Lynn 1, c se sw sec 733, flow (gas lift) 454 bbls, 2-in, acid 10,500 gals 5065-5160 ft.

Belfort Oil Co.'s Herd-Humble 1, c nw se sec 795, flow 94 bbls, 5/16-in, acid 9000 gals 4970-5130 ft.

Belfort Oil Co.'s Herd-Humble 2, c ne se sec 795, flow 99 bbls, 5/16-in, acid 9000 gals 5035-5130 ft.

Drilling & Exploration's Davis-Humble 1-A, c se se sec 728, flow 226 bbls, 7/16-in, acid 9000 gals 4995-5230 ft.

Humble's Randall 21, c nw nw sec 859, flow 442 bbls, 9/16-in, acid 6000 gals, perf 5035-5117 ft, td 5130 ft.

WEST TEXAS OLD WELLS DEEPENED

Ector County—Foster: Richmond Drl. Co.'s (was Ochiltree et al) Johnson 2, 330 ft from n and 1677 ft from w lines T&P 32, blk 42, T-2-S, otd 4326 ft, pump 440 bbls, shot 540 qts 4336-4475 ft, td 4480 ft.

Pecos County—Abell: Magnolia's Baldwin-State 3, c lot 3, H&TC 24, otd 5805 ft, flow 6 bbls 2-in natural, 5805-32 ft.

WEST TEXAS WILDCAT COMPLETIONS

Andrews County—Oil Discovery: Mid-Continent Pet. Corp.'s University-South 1, c nw nw sec 16, blk 10, elev 3242 ft, Yates sand 2980 ft, lime 4245 ft, pump 95 bbls 32-gr, shot 410 qts 4519-99 ft.

Andrews County—Failure: Union Oil Co.'s Means 1, c nw se PSL 23, blk A-36, elev 3202 ft, anhydrite 1890 ft, Yates sand 2950 ft, Grayburg lime 4210 ft, abnd 4699 ft.

Dawson County—Failure: Ray A. Albaugh et al's Higginbotham 1, c sw sw EL 5, blk H, elev 3046 ft, anhydrite 2160 ft, salt 2190-2820 ft, solid lime 4230 ft, abnd 5204 ft.

Mitchell County—Failure: Cosden Pet. Corp.-C. T. McLaughlin's Griffin-Shell 1, c se ne T&P 26, blk 28, T-1-S, elev 2133 ft, lime 1550 ft, abnd 3187 ft.

WEST TEXAS WILDCAT STARTS

Pecos County: Anderson-Prichard's Masterson-Humble 1, c sw sw T&StL 24, blk 140, rur.

Continental's Claybrook 1, c ne se T&P 2, blk 50, Tsp. 9, lcn.

Swisher County: L. A. Helms et al's Harris 1, c sw ne BS&F 103, blk M-10, rur.

North Texas

Clay County Drilling Encounters Show in Strawn

Clay County geophysical prospect encounters first oil shown in Strawn. Montague County lists wildcat completion, and 4 more strikes pending. Wise County assured of first commercial producer. Southwestern Young County wildcat to make producer.

Clay County: J. S. Youngblood and Bob Foree's Sanzenbarcher-Gulf 1, 5 miles east by north of Halsell multi-pay field, recovered 35 ft oil-cut mud without water when tester used in Strawn saturation 5330-40 ft, and was drilling shale 5395 ft.

Young County: Standard of Texas and Hanlon-Buchanan's Donnell 1, 3½ mi northwest of Murray and ½-mi west of abandoned wildcat producer, recovered 150 ft of oil and 750 ft of oil-cut mud when tester was used in lime at 4460-4503 ft. This prospect developed 2,000,000 ft of gas with oil spray from Strawn sand at 3830-49 ft, indicating two possible pays.

Wise County: Stanolind's Menasco 1, 1½ mi northwest of Park Springs and first producer for county, developed closed-in pressure of 1625 lbs on casing and 750 lbs on tubing while awaiting erection of tankage for completion test. Brief natural flowing tests assured successful completion from 2nd conglomerate zone in Bend at 5790-5818 ft, with 5½-in at 5887 ft. Plugged back from barren Ellenburger 7015-7310 ft.

Throckmorton County: Humble's Matthews 1, Alvin Tarter Survey and adjacent to shallow wells, awaiting official gauge after flowing 73 bbls of oil and 17 bbls of acid water in 1¾ hrs via chokes after using 3000 gallons of acid in Mississippian at 4597-4611 ft, total depth 4613 ft. It is 3½ miles south by east of a recent Marble Falls strike on the Brockman ranch.

Montague County: Continental's Hildreth 1, 1¾ mi northeast of Gant-Turner pool but apparently separated by a syncline, earned potential of 329 bbls of 40-gr oil, 30/64-in choke, after

IT *MUST* WORK OR ELSE ~ ~ ~

Because a parachute must be ready *all the time* for an emergency, it has to be made *right*. The same is true of valves — especially those located in strategic pipe lines, oil fields and refineries.

Ludlow Valves are always ready for emergencies. Throughout the petroleum industry, thousands of these rugged valves — many installed years ago — are now meeting the most severe tests, successfully! Operating on the famous double-disc, parallel seat principle, developed and perfected by Ludlow, these sturdy valves work smoothly, close securely— whether in action almost continuously or only on rare occasions. In peace or war, *Ludlow means value in valves*. Send for catalog.

THE LUDLOW VALVE MFG. CO., INC.
Troy, New York

***Construction Features:* Self-releasing 30° angle wedges and free-floating gates, self-adjusting to seats, afford smooth, trouble-free performance, long service. Rings are cleaned throughout stroke action. Gates are wedge-locked directly opposite ports and completely unwedged before raising. Ample tolerances provide easy action. Simple construction permits easy replacement of parts.**

LUDLOW VALVES

SINCE 1866

acid treatment and nitro shot in Simpson sand and lime saturation at 7160-7202 ft, bottomed in dry Ellenburger at 7240-56 ft. Failed to make producer in 6500-ft Viola saturation after acid, and Bend zone considered doubtful for production.

Continental's Ketchum 1, 2 mi east of Bowie and a failure in Ordovician series, is showing for small pumper in Strawn at 3330-38 ft after plugging back from 7506 to 3338 ft.

Sinclair Prairie's Eanes 1, 6¾ mi southwest of Bowie, is rated 50-60 bbls daily on pump without water from Bend perforations at 5912-22 ft, having plugged back from dry Ellenburger at 6913-7070 ft. Improved oil yield due from perforations in upper Bend at 5828-40 ft.

Sinclair Prairie's Henderson 2, Denver prospect, is attempting to exclude water after showing for probable oil producer from Basal Bend, or Marble Falls, through perforations at 6065-75 ft, plugged back from 7766 ft.

R. C. Lipscomb et al's Harmonvaughn 1, 2¼ mi northwest of Illinois Bend, plugged back from barren Ellenburger at 4918-82 ft to cement 7-in at 3995 ft and will perforate in 3800-ft Strawn.

Magnolia's Medley 1, west offset to Forestburg 4-well pool's discovery, tested 220 ft of rotary mud without shows on drill-stem test in broken saturation at 7229-75 ft in Marble Falls, topped at 7082 ft, being slightly low. Pipe will be set. Sinclair Prairie is drilling 3 more tests on its discovery block.

In Sanders 4-well pool, Sinclair Prairie's McCarty 1, north outpost, proved dry in Ellenburger at 6740-6860 ft, and plugged back to 2290 ft to use as water disposal well. Company's Zachary 1, east outpost, is drilling conglomerate at 5930 ft after indicating probable shallow oil strike from Strawn at 4780-4810 ft.

NORTH TEXAS FIELD COMPLETIONS

Archer County: Geo. Cooper et al's Moody 1, 330 ft from n and 990 ft from w lines nw SP 1, A-422, KMA lime 4108 ft, Barnett 4903 ft, Mississippi 5031 ft, Ellenburger 5043 ft, abnd 5108 ft.

White & Duncan's Richardson 5, 330 ft from e and 1594 ft from n lines MEP&P sur, pump 100 bbls, sand 1233-38 ft.

Clay County: Magnolia's Duncan-Magnolia 2, 2850 ft from e and 1200 ft from s lines blk 55, Bacon subdiv, abnd 1385 ft.

W. H. Spradling et al's Taylor-Elliott 3, 1318 ft from w and 2001 ft from s lines blk 56, Bacon subdiv, abnd 1146 ft.

Sid Taylor et al's Brannon-Stine 1, 990 ft out nec blk 58, Bacon subdiv, abnd 1880 ft.

Jack County—Hoefle: Anderson-Prichard's Edwards 1, 801 ft from w and 367 ft from s lines n-80-ac of A. James sur, Bend 4875 ft, pump 65 bbls oil, 70 water, acid 7000 gals 4916-23 ft.

Wichita County—K-M-A: W. H. Hammon et al's Hammon 13, 467 ft from w and 2415 ft from n lines s-240-ac ET 2, flow 376 bbls, ½-in, shot 140 qts 3964-94 ft.

Wichita County: C. Y. Gorman et al's Doyle 2, 330 ft from w and 1175 ft from s lines Geo. Wheelwright sur A-320, pump 5 bbls, sand 1211-20, td 1237 ft.

Young County — Padgitt: Shell's Bullock 2-A, 2365 ft from n and 467 ft from e lines TE&L 343, Bend 4336 ft, Mississippi 4772 ft, flow 2384 bbls oil, 688 water, 2-in, acid 1000 gals 4772-88 ft.

NORTH TEXAS WILDCAT COMPLETIONS

Archer County—Failures: Geo. Proctor et al's Langford 1, 1358 ft from n 441 ft from e lines blk 128, J. W. Carson subdiv, abnd 2281 ft.

Geo. Proctor et al's Pearston 1, 660 ft out swc blk 123, J. W. Carson subdiv, abnd 2795 ft.

Bridwell Oil Co.'s Osterman 1, 330 ft out nwc sec 33, blk 4, Clark-Plumb sur, abnd 1174 ft.

Bridwell Oil Co.'s Schrieber 1, 330 ft out sec sec 34, blk 4, Clark-Plumb sur, abnd 1193 ft.

Jack County—Oil Discovery: Taubert-McKee & Sinclair Prairie's Boyd 1, 660 ft out nec Seth H. Hazel sur A-258, elev 1095 ft, Bend 5482 ft, Barnett shale 6153 ft, Ellenburger 6389 ft, pump 35 bbls oil, 170 water, acid Ellenburger perf 6408-18 ft, td 6435 ft.

Jack County—Failures: R. B. Farris et al's Lindsey 1, 660 ft from e and 1980 ft from s lines L. N. Wright sur A-89, abnd 3503 ft.

Rathke Oil Co.-Phillips' Schnocke-Riley 1, 457 ft from nw and 477 ft from ne lines Albert Schnocke sur, elev 1109 ft, top Palo Pinto 530 ft, Bend 4485 ft, Mississippi 4890 ft, abnd 5338 ft.

Joe A. Worsham et al's Meador 1, c n¼ Henderson CSL sec 22, blk 1, jkd and abnd 5277 ft in gas.

NORTH TEXAS WILDCAT STARTS

Cooke County: R. G. Drilling Co.'s Gregory 1, 450 ft from n and 2607 ft from e lines of Geo. G. Steele sur A-1062, lcn.

Montague County: J. S. Youngblood and R. L. Foree's Benton 1, 5077 ft from w and 2985 ft from s lines Abel A. Lewis sur A-420, lcn.

TEXAS PANHANDLE FIELD COMPLETIONS

Carson County: Skelly's Schafer 157, I&GN 197, blk 3, pump 343 bbls, shot 543 qts 3090-3195 ft, td 3205 ft.

Skelly's Schafer 158, I&GN 189, blk 3, pump 463 bbls, shot 510 qts 3117-3215 ft.

Hutchinson County: Continental's Sanford 6-D, H&TC 77, blk 46, pump 132 bbls, 2860-77 ft.

J. M. Huber Corp.'s Bryan 3, TCRy 2, blk M-24, pump 66 bbls, acid 1000 gals, 3218-24 ft.

J. M. Huber Corp.'s Weatherly 24, A&B 25, blk Y, pump 344 bbls, 2958-3036 ft.

West Central Texas

Third Zone in New Taylor County Field

Third completion in Taylor County pool establishes deeper oil zone. Flippen horizon in Wimberly field extended northeast. Callahan County wildcat to make pumper.

Taylor County: Butler-Horne Drilling Co. and Geochemical Survey's Frazier 1, west offset to partnership's Reddin pool discovery in 2200-ft Flippen lime, flowed 38 bbls of oil hourly, through ¾-in choke from lower Hope lime at 2442-44 ft, establishing new pay level. Liner is to be run account casing leak.

Jones County: Fain-McGaha Oil Corp.'s Horne 2 expended Flippen sand to northeast in Wimberly pool in making natural flow at 2226-30 ft, then killed to cement pipe. Clark Cowden et al's Mashburn 2, northwest edge well that passed up big gas flow in Flippen at 2160-70 ft, was showing oil from upper Hope at 2302 ft, and will run pipe for test.

Callahan County: Anderson-Prichard's Sealy-Smith 1, wildcat 8 miles northeast of Goldsboro, rated at 75 to 100 bbls of oil, plus equal volume of water, on swabbing test from Morris sand at 3052-64 ft.

WEST CENTRAL TEXAS FIELD COMPLETION

Shackelford County: Roeser-Pendleton & Conoco's Cook 18-A-117, ET 117, abnd 1720 ft.

WEST CENTRAL TEXAS WILDCAT COMPLETIONS

Parker County—Failure: Tex Harvey Oil Co.'s Gilbert 2, 660 ft s and e nwc GWT&P Co. sur A-1958, abnd 4892 ft.

Shackelford County—Discovery: J. W. Keys et al's Andrews 1, 1405 ft from s and 660 ft from e lines ET 14, pump 8 bbls, sand 579-81 ft, td 583 ft.

Shackelford County—Failure: T. S. Stanfield et al's Todd 1, 1470 ft from n and 150 ft from w lines sec 10, Blind Asylum Lands, abnd 665 ft.

WEST CENTRAL TEXAS WILDCAT STARTS

Brown County: Wm. D. Austin et al's Williams 1, sw se se HT&B 40, lcn.

Central Texas Gas Co.-J. E. Whitesides' Kirkpatrick 1, center John Greenwood sur 155, lcn.

Callahan County: A. S. Goodloe et al's Brashear 1, 330 ft out nec sec 10, Lavaca CSL sur, lcn.

Eastland County: John. W. Emch and E. J. Keough's Bible 1, c sw se BBB&C 12, blk 7, dr 350 ft.

Shackelford County: Brown-Hancock Oil Co.'s J. M. Grimes 1, 330 ft out sec T&P 88, blk 12, lcn.

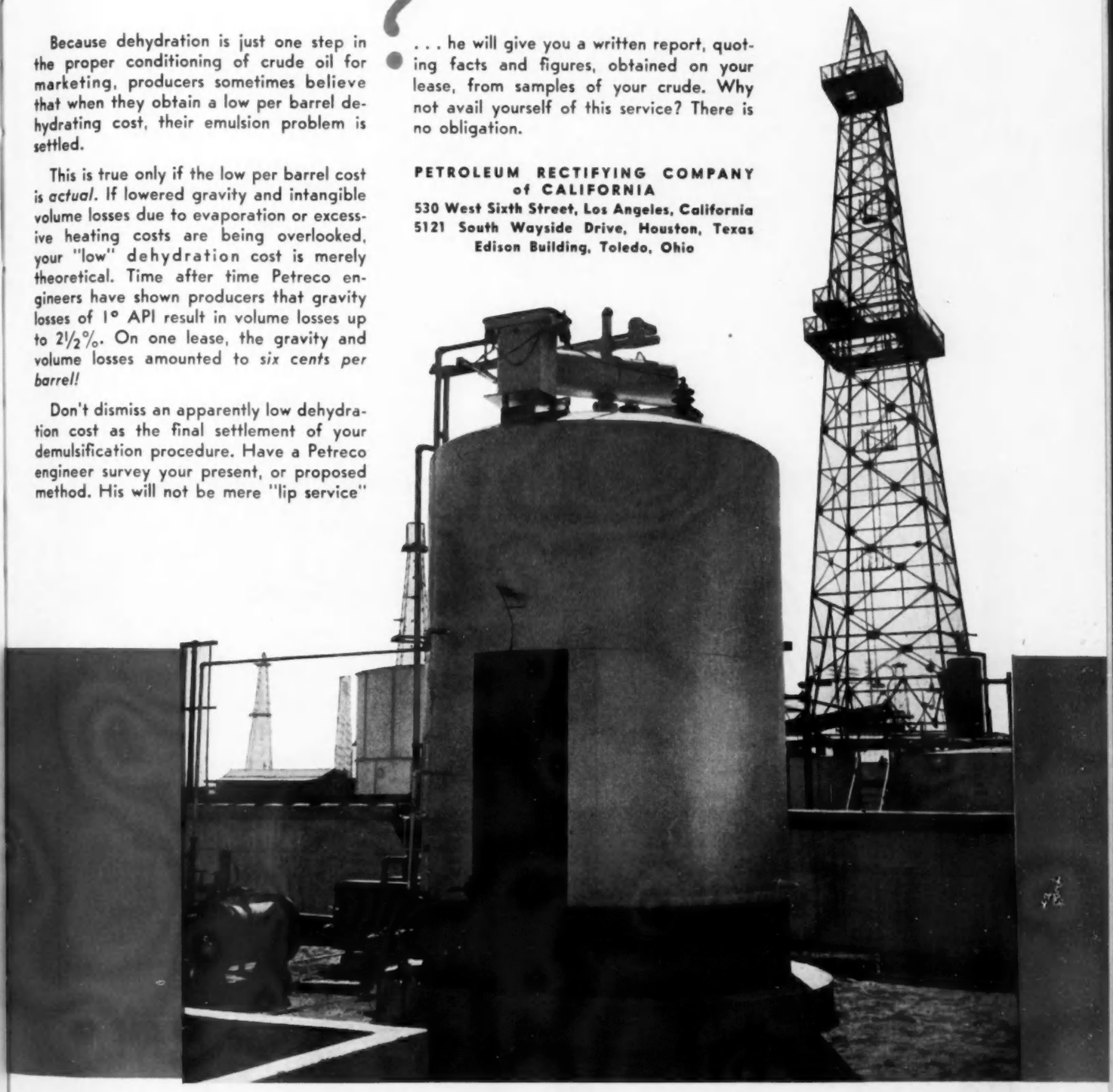
WHAT IS YOUR ACTUAL DEHYDRATION COST ?

Because dehydration is just one step in the proper conditioning of crude oil for marketing, producers sometimes believe that when they obtain a low per barrel dehydrating cost, their emulsion problem is settled.

This is true only if the low per barrel cost is *actual*. If lowered gravity and intangible volume losses due to evaporation or excessive heating costs are being overlooked, your "low" dehydration cost is merely theoretical. Time after time Petreco engineers have shown producers that gravity losses of 1° API result in volume losses up to 2½%. On one lease, the gravity and volume losses amounted to *six cents per barrel!*

Don't dismiss an apparently low dehydration cost as the final settlement of your demulsification procedure. Have a Petreco engineer survey your present, or proposed method. His will not be mere "lip service" . . . he will give you a written report, quoting facts and figures, obtained on your lease, from samples of your crude. Why not avail yourself of this service? There is no obligation.

PETROLEUM RECTIFYING COMPANY
of CALIFORNIA
530 West Sixth Street, Los Angeles, California
5121 South Wayside Drive, Houston, Texas
Edison Building, Toledo, Ohio



PETRECO
DEHYDRATING DESALTING

East Texas

Percilla Area Wildcat Makes Large Gas Flow

Production restored on Percilla prospect through completion of prolific distillate well from Woodbine. Cherokee County wildcat dry in Trinity series although regionally high. Market for coke 20-well pool partially relieved by tank-car shipments to an Illinois refinery.

Houston County: Russell Grimes et al's Ellis 1, 2 miles northwest of abandoned oil producer in Percilla area, rated 25,000,000 ft gas initial with distillate flow on preliminary test through Woodbine perforations at 5932-39 ft. Installing separator for official gauge.

Wood County: Producing wells at coke increased to 20 by completion of Amerada's Foster 1, flowing 91½ bbls in 8 hours through ¼-in choke; Paluxy perforations at 6332-45 ft. Amerada has 5 additional operations, including J. D. Kennemer 1, northeast outpost that is awaiting test of Paluxy sand at 6342-6408 ft, followed by water sand at 6410-16 ft. Amerada has developed market for 800 to 1000 bbls daily through tank-car shipments to Milan Refining Company's Milan, Illinois, plant.

Deep Prospects: Magnolia's Braly 1, Mixon area, Cherokee County, resumed drilling at 8838 ft to fulfill 9000-ft depth contract before abandoning after entering dry Travis Peak at 8829 ft, being 1571 ft high to recent small oil strike in Pettit at Larissa, 10 miles west. Braly 1 topped Pettit at 8620 ft, and tester at 8654-8755 ft yielded 4500 ft of drilling fluid without shows. In Nacogdoches County, Texas Co.'s Strahan 1, 7 miles northeast of Nacogdoches, logged top of Massive at 7429 ft, and was drilling Glen Rose at 7550 ft. P. D. Bowlen and Grady Vaughn's Simms 1, Bowie County's first Smackover-lime project, was drilling at 7040 ft and near base of Travis Peak, topped at 6050 ft, 28 ft low to test 5 miles east. In Henderson County, Delta Drilling Co. et al's Gentry 1, 3 miles southwest of Athens, entered Georgetown lime at 5040 ft and was drilling at 5395 ft. Delta Drilling Co. et al's Goldsmith 1, Wood County, was drilling chalk at 3950 ft, with top Austin at 3898 ft.

Woodbine Failures: O. W. Killam et al's Smith 1, Western Hopkins County, tested water in Woodbine series at 3882-4050 ft, and was drilling shaly-lime at 5163 ft to explore Paluxy. In Kaufman County, Jas. F. Milton and Martin's Rutland 1, 3 miles southeast Kemp, showed water in Woodbine, topped at 3063 ft, and drilling 3120 ft.

Hawkins Outpost: Carter-Gragg Oil Co.'s Little Sandy Club 1, Henry Woodland Survey and southwest of production, was drilling at 4630 ft after recovering 9 ft of oil-cut mud on drill-stem at 4479-4521 ft in sub-Clarksville, topped at 4497 ft, elevation 297 ft. Allowable of Hawkins wells was increased from 60 to 83 barrels daily October 1 because of growing demand for asphalt supplies.

Anderson County: Magnolia's Campbell 2, ¼-mile northeast of its Concord pool discovery, became third Woodbine failure in testing water at 4790 ft, and was drilling at 5065 ft in Georgetown, topped at 4940 ft, elevation 554 ft. It is due to be carried to Paluxy, or possibly deeper.

EAST TEXAS FIELD COMPLETIONS

Anderson County—Cayuga: John R. Bunn-Southwestern Drl. Co.'s Royal-Cone 1-C, 467 ft from s and 1250 ft from e lines 95.14-ac tr, T. Bristow sur, flow 51 bbls, ⅛-in, Woodbine 4025-33 ft.

Smith County—Chapel Hill: Sinclair Prairie's Smith 1, 660 ft out swc 172.21-ac lse and Chas. M. Hyde sur, flow 237 bbls, ¼-in, acid 4000 gals, Pettit perf 8132-70 ft, td 8360 ft.

Wood County—Hawkins: Humble's Kay 9, 330-ac lse, J. C. Burdett sur, flow 413 bbls, ¼-in, 4830 ft.

Humble's Parrish 5, 134.53-ac lse, H. E. Watson sur, elev 399 ft, Woodbine 4158 ft, Georgetown 4523 ft, abnd 4542 ft.

EAST TEXAS WILDCAT START

Morris County: John Coats et al's Pewitt 1, 990 ft out sec of BBB&C 426, sp.

Be sure to check the . . .

TRADING POST SECTION

on page 56 of this issue

Because of the scarcity of certain types of new equipment and the fact that some concerns may have a surplus of certain items and a serious shortage of others, this **"Used Equipment Forum"** has been inaugurated as a service and aid to operators in locating needed used equipment or in disposing of surpluses that may be needed by others.

Nowery J. Smith

Manufacturer of

Oil & Gas Separators
API Bolted Tanks, Galvanized and Painted Steel
Oil & Gas Heaters
Welded Production Tanks
Emulsion Treaterators
USS Panelbilt Steel Buildings

Fabricators of Steel Plate and Structural Shapes

NJS

NOWERY J. SMITH SUPPLY CO.
HOUSTON, TEXAS

IT'S ABOUT TIME IN NEW YORK

TIME, always valuable, is now more precious than ever. Save time by staying at the McAlpin. Its ideal midtown location is right where it's most convenient for business or pleasure.

Rooms with private bath
Single from **$3.30**
Double from **$4.95**

- 1 BLOCK FROM PENN STATION
- 5 MINUTES TO TIMES SQUARE
- B. & O. Motor Coaches stop at our door

HOTEL McALPIN
BROADWAY at 34th STREET, NEW YORK
Under KNOTT Management JOHN J. WOELFLE, Manager

Southwest Texas

New Wildcat Tests and Outposts Are Projected

Several wildcats and outposts projected. Another producer completed in Stewart field while second well in Brushy Creek area completed.

Wildcats: Continental is preparing to drill George West 1-A, 10,500-ft wildcat 8 miles southwest of George West townsite in Live Oak County and 3 miles southwest of Edwin M. Jones' George West 3-B, which showed distillate and was abandoned. Continental's well is on a 7714-acre lease in James L. Vaughn survey, A-467. This prospect attracted attention several months ago when the Jones blew out and caught fire from 9039 ft. The new wildcat will be drilled to Sparta-Wilcox.

Jackson County: Fields and wildcats in Jackson County are still in spotlight with several wells testing while others are preparing to start. Harrison & Abercrombie are spudding Botts 1, outpost one mile northwest of W. Stewart Boyle's discovery at Stewart. Location is on 95-acre lease in George Sutherland survey, A-75. It is scheduled to drill to 7000 ft with J. A. Gray of Houston as contractor.

Completion: Texas Co. has completed its first well in Stewart field, Jackson County, with Groberg 1 flowing 103 bbls through 5/32-in choke. Production is from 5005 ft with 5½-in casing to 5001 ft. This rig was skidded one-third mile southeastward to the company's Strickler 1.

Lavaca County: Shell has completed McManus 2, one mile east of McManus 1 discovery in Brushy Creek area. Perforated at 7710-45 ft in Wilcox the well flowed 100 bbls distillate and 3,275,000 cubic ft of gas daily through ¼-in choke. Tubing pressure was 2620 pounds, casing 2690 pounds. Total depth is 8008 ft although hole was plugged back to 7750 ft and 5½-in casing was set to 7754 ft after topping sand around 7715 ft.

LOWER TEXAS COAST FIELD COMPLETIONS

Jackson County—Francitas: Skelly's Milius 1, 540 ft fr ne & swl's & 656 ft fr sel of 80-ac lse, Schwind & Mahers addn of Francitas Farms subdvn, J. D. Newell sur, set 5½-in 7997 ft, perf 7401-03 ft, 71 bbls 3/32-in, td 8000 ft.

Jim Wells County—Seeligson: Sun's Canales 17, 660 ft fr nl & 1880 ft fr wl of J. E. Stevens sur 364, 5½-in 5992 ft, perf 5214-18 ft, flow 184 bbls ½-in, td 6024 ft.

Transwestern Oil Co.'s Dunlap 17, 660 ft fr sl & 6197 ft fr el 970-ac tr in SK&K 179, 6-in 6045 ft, perf 5200-04 ft, flow 65 bbls, 5/64-in, td 6050 ft.

Kleberg County—Stratton: Humble's King Ranch-Paso Ancho 20, 1980 ft fr wl of 1350-ac tr in Paso Ancho de Abajo gr, 5½-in 6593 ft, flow 144 bbls ½-in, td 6618 ft.

Nueces County—North Banquette: Osborn & Fleet and Mid-Continent's Dix 1, 2153 ft e, th 660 ft s fr nw cor 658-ac tr, Vincente Lopez de Herrera gr, abnd 7052 ft.

Nueces County—Agua Dulce: Richardson Petroleum Co.'s Guaranty Title 4, 1830 ft fr nl & 510 ft fr el of sec 305, F. Z. Bishop subdvn of 609-ac tr, 5½-in 6905 ft, perf 6795-6830 ft, gas-distillate, no gauge, td 6905 ft.

Lockhart Oil Co.'s Gerhardt 1, 660 ft fr wl & 760 ft fr nl of 208-ac tr sec 79, G. H. Paul's subdvn Driscoll rch, 5½-in 7100 ft, perf 7053-73 ft, gas input.

Nueces County—South Clara Driscoll: Texas Co.'s Flynn 4, sec 126, George Paul's subdvn of Driscoll rch, Jose A. Cabosos gr, A-63, 5½-in 5448 ft, perf 5260-65 ft, flow 62 bbls, ½-in, td 5450 ft.

Refugio County—Greta: Monday Oil Co.'s Heard 4, 758 ft fr nl & 509 ft fr wl & 5680 ft fr sl of 425-ac lse, J. H. Peoples sur, 5½-in 4451 ft, perf 4398-4405 ft, 82 bbls, 7/64-in, td 4460 ft.

San Patricio County—Odem: Seaboard & Atlantic's Compton 2, 866 ft fr el & 500 ft fr nl & 1530 ft fr wl blk 10, Cubage & Miller subdvn, John Hart & Sons gr, 5½-in 5541 ft, perf 5324-26 ft, 102 bbls, ½-in, td 5795 ft.

LOWER TEXAS COAST WILDCAT COMPLETIONS

Jackson County—Failure: J. A. Gray and John G. Mayo's Cound 1, William Whitaker sur, A-79, 3 mi ne Navidad gas field, abnd 4763 ft.

Jackson County—Failure: Texas Co.'s Collier 1, 3 mi sw Cordele field, 230-ac tr, James Kerr sur, A-39, set 7-in 2598 ft, perf 2480-82 ft, tested oil, swabbed, abnd 3725 ft.

LOWER TEXAS COAST WILDCAT STARTS

Jackson County: Guy I. Warren's Freeman 1, s of West Ganado field, 660 ft fr n&wl of 125-ac lse in William Menefee sur, A-53, lcn 6000-ft test.

Nueces County: R. H. Hawn's Bauer 1, 660 ft fr n&wl of 77-ac lse, lot 8 of blk 6 and lot 5 of blk 5, Nueces River Irrig. subdvn, Mariano Lopez de Herrera gr, lcn 6000-ft test.

SOUTHWEST TEXAS FIELD COMPLETIONS

Duval County—Seven Sisters: George W. Lyles' Wright 3, 450 ft fr sl & 900 ft fr el of 164-ac tr, GB&CNG sur, 5½-in 2300 ft, abnd 3603 ft.

Duval County—Casa Blanca: M. L. Massingill's Duval County Ranch 6, 990 ft fr el & 627 ft fr sl of GC&SF 293, set 5½-in 1035 ft, pump 31 bbls, td 1066 ft.

Jim Hogg County—Colorado: Humble's East 2-B, 660 ft fr n&wl's of 80-ac unit, Las Moretas gr, 5½-in 3057 ft, sand 3075 ft, 83 bbls, 3/16-in, td 3079 ft.

McMullen County—South Campana: Texas Co.'s Fee-Weinert 2, 660 ft fr nl & 1980 ft fr el of BS&F 103, A-137, 5½-in 3027 ft, sand 3013 ft, perf 3024-26 ft, flow 64 bbls, ⅛-in, td 3027 ft.

Starr County—Rincon: Continental's Slick 5-D, 1638 ft fr el & 1631 ft fr sl CCSD&RGNG 219, 6-in 4030 ft, perf 3985-91 ft, flow 193 bbls 3/16-in, td 4030 ft.

Continental's Slick 67-H, 2970 ft fr nl & 957 ft fr wl of CCSD&RGNG 486, 6-in 3957 ft, perf 3914-28 ft, 200 bbls, 3/16-in, td 3957 ft.

Starr County—Sun: Sun's Olivares 1, 495 ft fr wl & 1485 ft fr nl of 270-ac tr in Santa Teresa gr, 5½-in 4535 ft, sand 4525½ ft, 161 bbls, 9/64-in, td 4548 ft.

SOUTHWEST TEXAS WILDCAT COMPLETIONS

Duval County — Failure: Hiawatha and Henderson Coquat's Caballero 1, 120-ac tr, La Huerta gr, abnd 6215 ft.

Zapata County—Failure: Dulup Oil Co.'s Garza 6, 200-ac lse, Comitas gr, abnd 1656 ft.

PHOTO COURTESY SEISMIC EXPLORATIONS, INC.

"Out here" in this case happens to be a marsh location . . . but it could just as easily apply to any other swampy or remote shot hole location where the light weight feature of Fedralite Plastic Shot Hole Casing removes the transportation problem.

Fedralite Plastic Shot Hole Casing is so light in weight that one man can easily carry seven 10′ sections in his arms or on his shoulder. The damaged section from shot can be removed right in the field and made ready for the next location without "shopping" or exposing crew to dangers of splintered steel.

Yet its tremendous strength for its own weight, plus the "no thread" steel coupling that slips on, positively grips and easily slips off when time comes to remove casing from the hole, enables Fedralite Plastic Shot Hole Casing to meet today's exacting demands.

Fedralite Plastic Shot Hole Casing will give longer life because of its increased impact strength and its high resistance to absorption of water.

Write for complete information and prices.

FEDERAL ELECTRIC COMPANY, INC.

PLASTIC DIVISION

700 WAUGH DRIVE, HOUSTON — 8700 S. STATE STREET, CHICAGO

Texas Gulf Coast

More Tests Scheduled in Austin County Discovery

Continue flow tests on Austin County Wilcox discovery. Trinity County wildcat shows oil-cut mud on drill stem. Extension to Fig Ridge, Chambers County, shows oil and salt water.

Austin County: Ohio Oil Co. is continuing production tests on Kaechely 1, wildcat on Orange Hill prospect, Vital Flores grant, after making first test in perforations at 9293-9310 ft. After washing in and cleaning up, the well was tested for 8½ hours through ⅛-in choke. Based on this gauge flow was 41 barrels of fluid daily with 27 bbls oil and 14 bbls water, gas-oil ratio being 34,958-1. Total depth is 10,104 ft with 5½-in casing to 9411 ft. A second test is being made in this horizon and later pipe will be perforated in sands higher in hole to determine extent of production.

Trinity County: Magnolia is drilling deeper in Cameron 1-C, wildcat on Glendale prospect, after recovering 30 ft of oil-cut mud with 500 ft of salt water on a drill-stem test in perforations at 5570-82 ft in Wilcox. Operators are due to drill to 7500 ft for a test of lower Wilcox horizons. The wildcat is on lot 85 of J. A. Sepulveda survey, 3½ miles northeast of Glendale townsite. Magnolia drilled one previous dry hole in the area.

Chambers County: Sun is making test on Doornbos 1, northwest of production at Fig Ridge. Casing was perforated at 8214-30 ft with 48 shots for 720 barrels fluid daily through ⅜-in choke. The flow was 85 percent salt water and 15 percent oil, gravity 32 degrees. Total depth is 8340 ft in deviated hole with 6-in casing set on bottom.

Montgomery County: Superior recovered salt water on first test in Damuth 1, T. J. Nichols survey, Lake Creek field. Perforations were made in Wilcox at 11,825-840 ft. These holes have been squeezed off for another flow attempt. Total depth is 12,100 ft with 7-in set to 11,921 ft.

On the Pinehurst prospect of Montgomery County, LaGloria Corp. is running pipe to 11,921 ft in Grogan-Cochran 1, wildcat test bottomed in Wilcox and which is credited with having found several shows in this section. Hole was drilled to contract depth of 10,300 ft in Wilcox, but based upon showings found to this depth it was decided to drill deeper for a test of sands that produce at Lake Creek.

Harris County: Broderick & Gordon of Wichita Falls have projected Lobit 1, 7500-ft wildcat in Addicks area. Location is on 582-ac tract in D. Middleton survey, A-535, lot 11, block 1, being 506 ft fr north, east and west line of 40-acre unit.

TEXAS GULF COAST FIELD COMPLETIONS

Brazoria County — Danbury: Humble's Blakely 1-B, 61-ac lse, HTB 14, 5½-in 5810 ft, perf 5647-54 ft, flow 148 bbls, ¼-in, td 5830 ft.

Montgomery County — Fostoria: Atlantic's Foster Lumber 2, 486-ac tr, M. B. Lawrence sur, abnd 5867 ft.

TEXAS GULF COAST WILDCAT COMPLETIONS

Montgomery County — Failures: George W. Strake's Peel 1, Montgomery area, 40-ac unit, Owen Shannon sur 8 and 35, abnd 8562 ft.

George W. Strake's Jones 1, Willis area, 50-ac tr Timothy Cude sur, abnd 10,508 ft.

Tyler County—Failure: Dishman & Lucas' Angelina County Lumber 1, 100-ac tr, Benjamin Burke sur, A-8, abnd 6510 ft.

Wharton County—Failure: General Crude's Huston 1, Lane City area, 57-ac tr, S. Castleman sur, abnd 5650 ft.

Wharton County—Failure: Pan American's Ekvall 1, 3 mi nw Louise, 359-ac tr, Samuel P. Middleton sur, A-269, abnd 6524 ft.

TEXAS GULF COAST WILDCAT STARTS

Harris County: Gem Oil Co.'s Block 1, 88-ac tr, T. M. Dorsett sur, North Houston area, lcn 6900 ft test.

Matagorda County: United North and South Development's Stoddard 7, Buckeye area, 1189 ft e of e'ly el of L. L. Lambert 64-ac tr, G.B.M. Cotton sur, lcn 8300-ft test.

Louisiana Gulf Coast

Production Tests Due On Two Wildcat Wells

Production pipe cemented in Vermilion Parish wildcat. Sidewall samples taken in well in Pecan Island area. Napoleonville dome to get another deep test.

Vermilion Parish: Union Oil Co. has set production pipe to 11,691 ft in Louisiana Furs 1-C, wildcat southeast of Whitelake field. Operators drilled the well to 11,985 ft before running 5½-in casing. It is reported several favorable shows were encountered in the wildcat, located in Section 21-16s-2e. The well also is on what is called Fresh Water Bayou prospect. Union discovered and is presently developing Whitelake field.

In the same parish but on Pecan Island prospect, Humble has been taking sidewall cores in Louisiana Land & Fur 1, wildcat bottomed at 11,450 ft in shale and sand. The well, located in Section 34-16s-1e, is credited with having picked up sand stringers showing gas with oil odor. This well is six miles west of Union's wildcat. Operators are waiting on pipe to set for flow test.

Assumption Parish: William Helis et al of New Orleans have staked a 10,000-ft wildcat on southeast flank of Napoleonville dome, an area that has three previous deep tests. Operators will drill Armelise Planting 1, 990 ft e and 990 ft s of NW 17-12s-13e. C. & I. Drilling Co., Houston, has contract. Falcon-Seaboard drilled one deep test on Simoneaux acreage two years ago. Titanic Oil Co. later drilled two deep tests, one on Simoneaux tract and another on Armelise acreage. Echols set pipe in his last well after encountering several sands that carried oil and gas odor.

Pine Prairie: On southeast flank Pine Prairie dome, Evangeline Parish, C. & I. Production Co. is sidetracking Haas 1, well abandoned several months ago to 8505 ft but which is being deepened to test Sparta sands recently found productive.

SOUTH LOUISIANA FIELD COMPLETIONS

Beauregard Parish—Neale: Gulf's Campbell 1, 934 ft s alg wl fr nw cor se sec 26 & 823 ft e at ra in sec 26-3s-11w, 5½-in 11,211 ft, perf 11,058-68 ft, 259 bbls 5/32-in, td 11,222 ft.

Tide Water's Rice 1, 664 ft s&e nw cor ne

The OIL WEEKLY'S TRADING POST

USED EQUIPMENT FORUM

CLASSIFIED ADS . . . EQUIPMENT . . . SERVICES . . . PERSONNEL

FOR SALE

■ 1 Cooper Bessemer 3 cylinder engine, Type G M R size 12" x 14", 225 HP direct connected to Cooper Bessemer Compressor, high side 12" x 14", low side 6½" x 14". Excellent condition. Box 104, OIL WEEKLY, Houston, Texas.

■ FOR SALE: 375 feet good 12½ inch casing. Jesse Russell, Box 62, McCamey, Texas.

10,000 FEET TUBING FOR SALE

■ 10 and 11 thread 2½-inch upset, 21-foot length seamless used tubing in good condition, can be inspected Lytle & Phillips lease in Mexia Oil Field, or phone 9012.

■ 125 H.P. 250 W. P. Donovan Boiler, ready to go, $2,000. J. C. Davis, 503 Fidelity Bldg., Oklahoma City, Okla.

■ FOR SALE: 9 Chalk Wells fully equipped. Apply 219 Ricou Brewster Bldg., Shreveport, Louisiana.

WANTED TO BUY

■ WANTED: 6—10,000 to 55,000 BBL Tanks 12—500 to 1200 ft. air Compressors. 20—High pres. Cylinders 20 to 50 ft. long. RUSSELL STANHOPE, 60 E. 42nd St., New York.

SITUATIONS WANTED

■ Drilling-Production Superintendent, 22 years experience in foreign and domestic oil fields, desires connection. Excellent references. 3-A Draft Classification. Box 110, Oil Weekly, Houston.

■ Production and Drilling Superintendent desires position, above draft age, many years experience drilling wells and handling production, best of references. Box 130, Oil Weekly, Houston.

OIL PATENTS

■ OIL PRODUCERS with vision urgently need these 3-U.S. and 1 Canad. Patents for the Extraction of Oil from exhausted formation of Petroleum and Oil bearing sands, for sale or in royalty by Leo Strandell, Lomita, Calif.

OIL LEASES & DRILLING ACREAGE

■ GOVERNMENT OIL RESERVATIONS opened American citizens for oil lease. Want several join filing developing area. Small expense. Box 122, Oil Weekly, Houston.

OIL INDUSTRY PRINTED FORMS

■ Priority forms, drilling, gauge, production inventory, payroll, pipe tally, material transfer and more than fifty other field and office printed forms, regularly used by oil companies, immediately available to meet your requirements. Complete catalog on request. Address Oil Form Dept., Gulf Publishing Company, Houston, Texas.

ADVERTISING RATES

for the

TRADING POST SECTION

Regular classified advertisements for this special section, set in type this size without border, take flat rate of 7 cents per word for the first insertion and 5 cents per word for each subsequent insertion of same copy. Display advertisements for this section, set in suitably larger type with ruled border, are $5.00 per inch for first insertion and $4.00 per inch for subsequent insertions. Remittance must accompany copy which should be sent to:

Trading Post Section, THE OIL WEEKLY
P. O. Box 2608 Houston, Texas

BUY UNITED STATES WAR BONDS

34-3s-11w, 5½-in 11,779 ft, perf, flowed 291 bbls, 3/16-in, td 11,800 ft.

Cameron Parish—East Hackberry: Stanolind's Duhon 1, 1562 ft e & 990 ft n of sw cor sec 27-12s-10w, abnd 10,824 ft.

Jefferson Parish—Lafitte: Texas Co.'s Kerner 3, 2917 ft e & 2620 ft n of sw cor 22-17s-24e, perf 8545-65 ft, 180 bbls, ⅛-in, td 10,671 ft.

Plaquemines Parish—Venice: Tide Water's Buras Levee 19, 1515 ft e & 350 ft s nwc sw 23-21s-30e, 7-in 9614 ft, perf 9475-9500 ft, 324 bbls 9/64-in, td 9616 ft.

St. Martin Parish—Lake Chicot: Amerada's State-Lake Chicot 4, 3450 ft s & 1167 ft w nw cor 31-11s-10e, 5½-in 9344 ft, perf 8132-74 ft, 227 bbls ⅛-in, td 11,805 ft.

SOUTH LOUISIANA WILDCAT STARTS

Terrebonne Parish: Humble's Continental Land & Fur 2-B, Turtle Bay area, fr se cor 25 go w'ly 1259 ft alg sl & n'ly at ra 1773 ft in sec 25-17s-13e, lcn 12,000 ft test.

Assumption Parish: William Helis' Armelise 1, Napoleonville dome, se flank, 990 ft e & 990 ft s of nw cor 17-12s-13e, C. I. Drilling Co., cont., lcn 10,000-ft test.

North Louisiana

Gas Field Opened In Concordia Parish

One mile northeast of Lake St. John field, Concordia Parish, a wildcat drilled by E. C. Johnston, Longview, Texas, drilling contractor, was completed flowing 30,000,000 ft of gas per day from 2170 ft, with rock pressure 922 pounds. The well is F. D. Brown 1, 4-9n-10e, which was drilled to 5050 ft, plugged back to 2170 ft.

NORTH LOUISIANA FIELD COMPLETIONS

Claiborne Parish — Haynesville: Midstates' Taylor 1, se 3-23n-8w, flow 487 bbls, ½-in, tp 325, cp 425, perf Pettit lime 5337-52 ft, acidized 5000 gals, td 5419 ft.

LaSalle Parish — Little Creek: O'Meara Bros.' Tensas Delta 1, 14-9n-1e, abnd 3800 ft.

Union Parish—Monroe: Interstate Natural Gas Co.'s Fee 121, 18-21n-4e, 15,617,000 gas, rock pressure 800 lbs, td 2152 ft.

NORTH LOUISIANA WILDCAT COMPLETIONS

Catahoula Parish: Continental's Jones 1, c se se 35-10n-8e, abnd 6003 ft.

N. H. Wheless' Louisiana Delta C-1, 1-6n-5e, abnd 6314 ft.

Tensas Parish: Las Tecas Petroleum Co.'s Weatherly A-1, 38-12n-12e, abnd 6113 ft.

Claiborne Parish: Sylvestres McElwee 1, c se se 11-22n-7w, abnd 6005 ft.

NORTH LOUISIANA WILDCAT STARTS

LaSalle Parish: H. L. Hunt's Tensas Delta E-1, c se nw 2-4n-4e, lcn.

Grant Parish: Placid Oil Co.'s Tremont B-4, c se sw 10-9n-1e, lcn.

ARKANSAS FIELD COMPLETIONS

Lafayette County — Midway: Barnsdall's Powell 3, c ne nw 10-15s-24w, flow 14 bbls hr, ¼-in, tp 280, porosity 6480 to 6505 ft, td 6614.

Arkansas Fuel Oil Co.'s Turner 2, c se se 12-15s-24w, flow 200 bbls, ¼-in, perf 6469-76 ft, td 6490.

MISSISSIPPI WILDCAT STARTS

Madison County: Love's Anderson 1, c ne nw 12-8n-1w, rig up 4500-ft test.

Lincoln County: California Co.'s Smith 1, c nw nw 4-7n-7e, dk.

California

Wildcats in Kern and Madera Counties Quit

Kern and Madera County wildcats abandoned. New exploratory project being readied for Castaic area, Los Angeles County.

After encountering only 20 ft of poor oil sand above 1727 ft, Union Oil Co. has abandoned Welport Fee 78-36 in the McKittrick district in brown shale at 2800 ft. Base of Tulare was placed at 833 ft.

Arrangements have been completed by Southern California Petroleum Corp. for a wildcat 1¼ miles northwest of a test in the Castaic area drilled by St. Anthony Oil Corp. a year ago. New test is to be in 4-3-16.

Madera County: Texas Co. has abandoned Chowchilla 27-26, Sec 26-11-14, Chowchilla-Moffatt Dome area in sand and shale at 8245 ft. Top of Zilch was placed at 2840 ft; Kreyenhagen 3560 ft; Eocene 3950 ft. No showings of importance were reported.

CALIFORNIA FIELD COMPLETIONS

Fresno County—Coalinga Old Field: Section 30 Oil Co.'s No. 10, 1400 ft n, 200 w sec 30-19-15, pump 15 bbls, 13.9-gr, 110 ft perf 1255 ft, td 1255 ft.

Standard's No. 101-35A, 992 ft s, 2449 w nec 35-19-15, flow 250 bbls 19.8-gr, ½-in, 140/355 lbs, 323 ft perf 3066 ft, oil sand 2712 ft, Astrea bed 2726 ft, td 3090 ft.

Fresno County — Riverdale: Amerada's Young 4-15, 330 ft, 33 e w¼c 15-17-19, flow 334 bbls 39.2-gr, perf 6730-6792 ft, 11/64-in, 1360/760 lbs, Eocene 7918 ft, Cretaceous 8075 ft, td 8600 ft, pd 7940 ft.

Kern County — Belridge-South: General's Belridge 13-A, 1327 ft n, 2531 e w¼c 3-29-21, pump 74 bbls 14.8-gr, 413 ft perf 914 ft, td 925 ft.

Ohio's Hopkins Fee 2, 767 ft s, 233 w nec 4-29-21, pump 92 bbls 13.8-gr, perf 600-864 ft, td 865 ft.

Ohio's Hopkins 5, 233 ft s, 1682 w nec 4-29-21, pump, no est, 252 ft perf 838 ft, td 840 ft.

Kern County—Greeley: Standard's KCL 12-17, 566 ft s, 2078 e w¼c 7-29-26, flow 948 bbls 35.1-gr, 14/64-in, 1190/0 lbs, 273 ft perf 11,510 ft, Vedder 11,295 ft, td 11,510 ft.

Kern County—McKittrick: Tide Water's Del Monte 65, 1140 ft n, 545 e swc lease, sec 13-20-21, pump 34 bbls, 179 ft perf 1123 ft, td 1125 ft.

Kern County — Midway-Sunset: Chanslor-Canfield's No. 30-26, 1300 ft n, 620 e c 26-31-22, pump 23 bbls 18-gr, 166 ft perf 2076 ft, td 2077 ft.

Standard's 89-5K, 2310 ft s, 2295 e nwc 5-11-23, pump 6 bbls, 20 ft perf 2775 ft, Kinsey zone 2762, td 2777 ft.

Kern County—Mount Poso: Chanslor-Canfield's Mon 6, 550 ft s, 1650 e nwc 26-27-28, pump 100 bbls 15.8-gr, 40 ft perf 1596 ft, td 1597 ft.

Kern County—Paloma: General's Gallagher 61-33, 330 ft s, 3681 e nwc 33-21-26, flow 422 bbls 36.4-gr, 16/64-in, 1075/1150 lbs, completed barefoot, tubing hung 10,899 ft, oil zone 10,850, Chert zone 10,350 ft, td 11,043 ft.

Kern County—Round Mountain: Honolulu's No. 84, 200 ft n, 235 w e¼c 20-28,-29, flow no est, 332 ft perf 1734 ft, td 1780 ft.

Kern County—Williams: Shell's Williams 55-6, 2907 ft s, 3100 e nwc 6-28-20, flow 204 bbls 16.5-gr, ½-in, 70/0 lbs, 64 ft perf 2308 ft, 1st oil sand 2238-2345 ft, oil sand and gray sand 2345-2507 ft, td 2573 ft.

Los Angeles County—Montebello: Standard's Baldwin 92, 340 ft s, 229 ft nwc 6-2-11, pump 31 bbls, 22.5-gr, 853 ft perf 2799 ft, td 2800 ft.

Los Angeles County—Wilmington: Long Beach Oil Development's No. 36, 530 ft nely along n line Seaside blvd from e line 22nd, thence 330 ft sely at r/a, pump 150 bbls 23-gr, perf 3275-3537 ft, td 3542 ft.

Texas Co.'s Refinery Fee 4, 1080 ft s 335 ft e sec Goodrich & State sts, pump 53 bbls 17-gr, perf 3268-3389 ft, td 3395 ft.

Orange County—Huntington Beach: Signal's Signal-Bolsa 35, 3113 ft n, 1250 ft swc Standard's Bolsa "C" lease, pump 152 bbls 24.7-gr, 203 ft perf 3950 ft, td 4024 ft.

Santa Barbara County—Santa Maria Valley: Hancock's Brown 4, 330 ft n, 990 w sec n½ nw 25-10-34, flow 920 bbls, 15-gr, 1-in, 880 ft perf 4168 ft, td 4168 ft.

Ventura County—Ventura Avenue: Shell's Taylor 147, 1050 ft n, 2675 w c/l No. 11, flow 869 bbls 30-gr, 12/64-in, 730 ft perf 9757 ft, td 9757 ft.

CALIFORNIA WILDCAT COMPLETIONS

Kern County — Failure — Wheatville Area: General's Noble 88-9, sec 9-17-18, Kreyenhagen 7650 ft, Eocene 8050 ft, abnd 8508 ft in Eocene.

Kern County—Failure—Mount Poso Area: Ring Oil Co.'s Glide 1, 330 ft n 635 ft w sec n½ s½ nw 19-26-28, Vedder 1940 ft, abnd 1960 ft.

Madera County — Failure — Moffatt Dome Area: Texas Co.'s Chowchilla 27-26, 990 ft n, 990 e swc 26-11-14, Kreyenhagen 3925 ft, 1st Panoche 5920 ft, 2nd Panoche 6380 ft, abnd 8245 ft.

CALIFORNIA WILDCAT STARTS

Fresno County: Texas Co.'s 83-18, 18-21-15, lcn, Coalinga area.

Kern County: Continental's Mabry 3, 26-26-18, foundation, Devils Den area.

Los Angeles County: Southern California Petroleum Corp.'s Lassalle 44-1, 3-3-6, lcn, Newhall area.

Orange County: J. E. F. Oil Co.'s No. 1, 23-4-11, lcn, Stanton area.

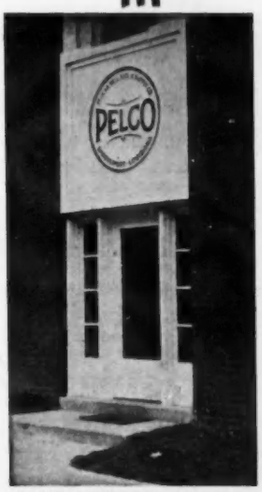
Ventura County: Continental's Holser 2, 14-4-18, lcn, Piru area.

Fletcher & Babcock's O'Leary 1, 29-4-20, lcn, Timber Canyon area.

All Right, Let's!

"Spare the oil and spoil the machine. Don't let it set out and rust. Let's keep it running for the duration" says the ever helpful "Tell All" school of advertisers, now unable to make deliveries.

All right, let's! But why the primer stuff for an industry traditionally intelligent and conservant? Let's DO something! Let's dish up more cooperation and less conversation about conservation. As far as it goes, or will go, we have a modern shop. More important, aforesaid plant is managed by patriotic men whose ingenuity has been challenged daily for 34 years. When equipment quits, TRY PELCO FIRST.



WE'VE SUPPLIED OIL MEN IN OUR AREA FOR 34 YEARS

PELICAN WELL TOOL & SUPPLY CO.

SHREVEPORT LOUISIANA

PELCO

Houston
Berwick
Houma
New Iberia
Lake Charles

Michigan

Missaukee County Wildcat Cores Three Possible Pays

Best northern prospect this year indicated by saturated cores on Missaukee County wildcat.

Missaukee County: Three probable commercial pays cored in the Dundee lime-dolomite section by Sun Oil Co. in State A1, S½ SW NW 11-23n-5w, Enterprise Township, has elevated the wildcat to top position of interest in Michigan. Test logged Dundee horizon high at 3184 ft, and cored to 3465 ft, with high porosity and oil-saturated zones picked up between 3209 and 3300 ft. Company undecided whether to case for production test or drill ahead to original 4500 ft; Richfield lime objective.

Gordon Oil Co. completed Blue 1, Section 26-22n-6w, Aetna Township, for 62 bbls after 250-gal acid shot to Dundee pay at plugback depth of 3840 ft. Discovery disappointing following initial showing six weeks ago of natural flow immediately after drill in of 186 bbls in 19 hours. Gordon started test half mile west on Reams 1 as only follow-up development in district.

Mecosta County—Fork: Smith Petroleum Co.'s Carpenter 1, NE SE SE 6-16n-7w, Fork Township, diagonal southwest offset to discovery, flowed 476 bbls natural from Dundee at 3828 ft as first new completion since field was opened. Gulf Refining Co.'s Compson 1, S½ SE NE 6 diagonal northwest offset to discovery, carried only show of oil and picked up black water in Dundee at 3865-66 ft. Well shut down for orders. Structure dipped 10 ft.

Ogemaw County: Ohio Oil Co.'s Grow 3, 35-22n-2e, West Branch Township, being plugged back from 3853 to 3659 ft, after first of two cored saturation zones showed water. Well is testing Richfield-Sylvania section in old West Branch oil field, now developed for 1800 and 2600 ft. Traverse and Dundee oil production.

Van Buren County: Fisher - McCall Oil Co.'s Davis 1, SW SE NE 9-2s-16w, Bangor Township, completed for 15 to 20 bbl pumper in Traverse lime at 1018 ft for discovery two miles north of old pool.

Gladwin County: Sun Oil Co. to drill first deep well, about 5000 ft, on Bentley-Buckeye structure.

MICHIGAN FIELD COMPLETIONS

Arenac County — Adams: Mogul Oil Co.'s Lusher 1, c se nw 35-19n-3e, Dundee 2820 ft, abnd 2972 ft.

Arenac County—Deep River: Arenac Oil & Gas Co.'s Bullock 1, c nw 21-19n-4e, abnd 1512 ft.

Bay County — Kawkawlin: Basin Oil Co.'s Porter 2, s½ ne se 2-14n-4e, Dundee lime, flow and pump 220 bbls, 2850 ft.

Clare County — Headquarters: Pure's Trubell 3, n½ sw sw 3-20n-3w, Traverse lime, flow 420 bbls, 3317 ft.

Clare County — Winterfield: Taggart Bros. Co.'s Wittmill 105, c se 31-20n-6w, Stray sand, 6,500,000 gas, 1344 ft.

Taggart Bros Co.'s Goodrich 106, c sw 32-20n-6w, Stray sand, 2,340,000 gas, 1331 ft.

Kent County—Grand Rapids: Muskegon Dev. Co.'s Newhouse 1, c w½ sw 6-6n-12w, Traverse lime, pump 21 bbls, 1866 ft.

Mecosta County — Fork: Smith Pet. Co.'s Carpenter 1, ne se se 6-16n-7w, Dundee dolomite, pay 3825-27 ft, flow 476 bbls, 3828 ft.

Osceola County—Evart: Sun's Stein-Wilcox 1, n½ sw ne 27-18n-8w, Dundee dolomite, flow 162 bbls, 3733 ft.

MICHIGAN WILDCAT COMPLETIONS

Allegan County—Failure: Thomas Fensom's Rebeski 1, nw sw se 34-4n-12w, Traverse 1598 ft, 1603 ft.

Livingston County—Failure: H. C. Nelson's Walker 1, se nw nw 33-3n-5e, abnd 1125 ft.

Missaukee County—Aetna Field Discovery: Gordon Oil Co.'s Blue 1, s½ se se 26-22n-6w, elev 1182 ft, Dundee lime 3834 ft, pay 3835-42 ft, flow 186 bbls 19 hrs, died, pump 57 bbls oil and 3 bbls water, pb to 3840 ft, acidized 250 gals, flow 62 bbls, net, td 3840 ft.

Newaygo County—Failure: Pure's Kasen 1, s½ sw sw 22-16n-11w, Monroe 3610 ft, 4733 ft.

Osceola County — Failure: E. R. Roach's Swanson 1, c ne se 2-19n-10w, Dundee 3868 ft, 4001 ft.

Van Buren County—New Field Discovery: Fisher-McCall's Davis 1, sw se ne 9-2s-16w, Traverse lime 1016 ft, pay 1016-17 ft, pump 19 bbls, td 1018 ft.

MICHIGAN WILDCAT STARTS

Allegan County: James S. Brailey's Shields 1, ne ne se 26-4n-13w, lcn.

Kent County: James J. McGerry's Brown 1, s½ se ne 30-5n-11w, rig.

Lake County: W. Spencer Cook's Lannings 1, n½ nw se 30-17n-13w, rig.

Standco
NO-SMOKE
STANDCO BRAKE LINING
Is the driller's best friend because it makes the easiest brake known and "feeds off" evenly while drilling. It never scores brake rims. See page 2257 Composite Catalog.
Standco Brake Lining Co.
HOUSTON

REGISTERED PROFESSIONAL ENGINEERS
Air • Gas • Water
REPRESSURING
RECYCLING • PRESSURE MAINTENANCE
INSTALLATION • OPERATION
PETROLEUM ENGINEER
JO H CABLE
WICHITA FALLS TEXAS
GAS MEASUREMENT • PERMEABILITY
COMPRESSOR PLANTS • POROSITY
BOTTOM HOLE PRESSURE • SATURATION
GAS OIL RATIOS • RECOVERABLE OIL
• CONTROL OF FLOW THRU FORMATION
REGISTERED PROFESSIONAL ENGINEERS

William M. Barret, Inc.
Consulting Geophysicists
Specializing in Magnetic Surveys
Contracts accepted for domestic and foreign projects, using the most improved instrumental and interpretative technique.
GIDDENS-LANE BUILDING
SHREVEPORT, LOUISIANA

HOUSTON LABORATORIES
Analytical and Consulting Chemist
Podbielniak Gas Analysis
Oil Field Brines, Waters and Cores
Complete Evaluation of Crude Oils
Long Distance 267, Box 132, Houston, Tex.

THE FORT WORTH LABORATORIES
Analysis of oil field brines, cores, gas, oil and minerals. Field gas testing. R. H. Nash, Vice President; Long Distance 138. 823½ Monroe Street, Fort Worth, Texas.

Eastern States

NEW YORK COMPLETIONS

Allegany County: R. B. Moore et al's Moran farm, Bolivar, 7 bbls, Richburg, 1269 ft.

Pure Penn Pet. Co.'s Christman farm, Bolivar, 9 bbls, Richburg, 1436 ft.

Ebenezer Oil Co.'s Vincent farm, Scio, 8 bbls, Richburg, 1140 ft.

Bradley Prod. Corp.'s Sprague farm, Alma, 6 bbls, Richburg, 1333 ft.

Bradley Prod. Corp.'s Rolls farm, Alma, 7 bbls, Richburg, 1359 ft.

Otsquago Corp.'s Pike farm, Alma, 12 bbls, Richburg, 1442 ft.

L. E. Norton et al's Coats farm, Scio, 8 bbls, Richburg, 1288 ft.

Pat Oil Co.'s Shaughnessy farm, Alma, 10 bbls, Fords Brook, 1359 ft.

Rico Oil Co.'s Alger farm, Scio, 6 bbls, Scio, 959 ft.

H. W. Patterson et al's Browning farm, Scio, 6 bbls, Scio, 736 ft.

Bradley Prod. Corp.'s Coats farm, Wirt, 7 bbls, Richburg, 1381 ft.

Wilson Oil Co.'s Wales farm, Genesee, 5 bbls, Richburg, 1340 ft.

Scott & Sackinger's Scott farm, Bolivar, Waugh-Porter, 9 bbls, 1438 ft.

Gray Oil Co.'s Smith farm, Genesee, 10 bbls, Richburg, 1433 ft.

Martin O'Connor Est.'s Hall farm, Genesee, 5 bbls, Richburg, 1370 ft.

INTAKE WELLS

Allegany County: W. J. McKee et al's McKee farm, Bolivar, Richburg 1437 ft.

Star Oil Co.'s Neff farm, Wirt, Richburg, 1320 ft.

Curt Oil Co.'s Williams farm, Alma, Richburg, 1359 ft.

Bradley Prod. Corp.'s Crandall farm, Alma, Richburg, 1262 ft.

Ford Oil Co.'s Kemp farm, Alma, Richburg, 1356 ft.

Marsh Oil Co.'s Fay farm, Bolivar, Richburg, 1412 ft.

Nova Oil Co.'s Brown farm, Alma, Fords Brook, 1372 ft.

Bliven Hill Oil Co.'s Smith farm, Scio, Scio, 920 ft.

Messer Oil Co.'s Buna Vista farm, Wellsville, Scio, 1047 ft.

OHIO COMPLETIONS

Ashland County: Cramer & Hogue's Aker 1, 0.09 gas, 2853 ft.

Athens County: Ohio Fuel's Richardson 4, abnd, 1451 ft.

Coshocton County: Upham Gas' Workman 1, abnd, 6341 ft.

Holmes County: H. E. Perkins' Heaton 1, 0.06 gas, 3230 ft.

Jefferson County: C. S. Kelly et al's Barnhouse heirs 7, abnd 1250 ft.

Knox County: Ohio Fuel's Lower 2, abnd 2889 ft.

Licking County: S. I. Miller et al's McDonald 2, 0.17 gas, 774 ft.

Loraine County: McMillen's Bendik 1, abnd 2400 ft.

Medina County: Ohio Fuel's Damon 1, 2.1 gas, 3565 ft.

Meigs County: Pearl Ash's Titus 2, 1.65 gas, 858 ft.

Monroe County: A. E. Robinson et al's Hawkins 1, 25 bbls, 1560 ft.

Morgan County: C. P. Bowman et al's Creighton 1, 10 bbls, 543 ft.

Swingle's Bush 1, 0.2 gas, 1181 ft.

Muskingum County: Ohio Fuel Gas Co.'s Buker 1, 48 bbls, 4065 ft.

Noble County: Felix Gerst's Weisant 1, 0.12 gas, 1529 ft.

Perry County: Preston Oil's Ream 2, 27 bbls, 3176 ft.

J. C. Orndoff's Schwartwell 1, 0.02 gas, 1160 ft.

Stark County: East Ohio's Provost 1, 0.12 gas, 4598 ft.

Summit County: Wiser Oil Co.'s Doolittle 1, abnd 3572 ft.

Wayne County: Clark Co.'s Sidle 1, 1.97 gas, 3134 ft.

PENNSYLVANIA COMPLETIONS

Armstrong County: Equitable Gas Co.'s King 1, 0.08 gas, 3498 ft.

Fayette County: Wahler-Power Oil & Gas' Risco 1, 0.05 gas, 2412 ft.

Greene County: Mfgrs. Light & Heat Co.'s Smith 5, 0.02 gas, 3350 ft.

Indiana County: T. W. Phillips Gas & Oil Co.'s Davis 1, abnd 3475 ft.

OLD WELL DRILLED DEEPER

Greene County: Houze-Convex Glass Co.'s Gabler 1, 1.5 gas, deepened from 1495 to 1585 ft.

WEST VIRGINIA COMPLETIONS

Boone County: Pure Oil Co.'s Lafollette, Robson & Prichard 43, 0.20 gas, 3327 ft.

Calhoun County: Hope Natural Gas Co.'s Vandervender 2-8616, 0.12 gas, 2186 ft.

Clay County: Pittsburgh & W. Va. Gas Co.'s

Elk River Coal & Lumber Co. 7865, 0.17 gas, 2337 ft.

Gilmer County: Phillip Lemon's Leith 1, 4 bbls and 0.07 gas, 1841 ft.

Jackson County: Columbian Carbon Co. & Mullin Gas Co.'s Fisher 1, 16.07 gas, 5283 ft.

Spartan Gas Co.'s Walker 1, 12.84 gas, 5172 ft.

United Carbon Co.'s Staats 1057, 3.39 gas, 5045 ft.

Marion County: R. S. Monroe's Watson 1, abnd 3141 ft.

Pleasants County: Newland Oil & Gas Co.'s Newland 3, 1 bbl, 1142 ft.

Putnam County: Henderson Gas Co.'s Hays heirs 1, 0.13 gas, 2359 ft.

Roane County: American Oil Dev. Co.'s Romaine, Riley & Conley 1, 5 bbls, 1832 ft.

Upshur County: Cumberland, Allegheny Gas Co.'s Waon 324, 0.08 gas, 3973 ft.

Rocky Mountain Area

Oil Strike in Montana Near Canadian Boundary

Within a two-week period Montana has second oil discovery. Deep Colorado wildcat encounters gas in Dakota. Pilot Butte extended north, delimited south, while wildcat starts four miles north. Horse Creek, Wyoming, wildcat disappointment in Dakota which showed saturation in core.

Montana Oil Strike: Twin Rivers Nose, Glacier County, near the International Boundary, a gas discovery a year ago, proved for oil in Ed Reagan's second test, Tribal 194 2, C NW NE 27-37n-7w, swabbing and flowing 96 bbls of oil initial from Madison lime at 3842-44 ft, pb from water at 3901-06 ft. Oil discovery mile south of Reagan's Tribal 194 1, which in 1941 completed for 6.0 ft gas and spray of distillate at 3869 ft in Madison. Two weeks ago R. C. Tarrant completed a small wildcat oil well in Midway area, Pondera County.

Douglas Creek: Superior Oil Company, Unit operator joint with Union and Continental, Unit 1, NW NW SW 5-3s-101w, developed .821 ft gas and 25 ft of drilling fluid, drill stem open 15 minutes at 4381 ft in Basal Dakota, Douglas Creek structure, northwestern Colorado. Wildcat drilling ahead for Pennsylvanian.

Pilot Butte: Mile north Tensleep new zone discovery, old Pilot Butte field, Superior Oil Co. and British-American Oil Producing Co.'s Tribal 2, NE NW SW 15-3n-1w, flowed 500 bbls initial from Tensleep, td 6250 ft. Mile south of production, British-American's Enos 1, cel, NE NW 22-3n-1w, checking low, abnd at 3366 ft.

Horse Creek: General Petroleum's 78-31-G (Government), SW SE SE 31-17n-68w, Horse Creek structure, Laramie County, 50 miles east and 120 miles southwest of nearest Wyoming oil fields, cored saturation in the Dakota sand from 5270-90 ft, but was disappointing on drill-stem test from 5254-90 ft showing only a stand of green oil. Open for several hours. Wildcat drilling ahead for Sundance.

WYOMING FIELD COMPLETIONS

Fremont County—Circle Ridge: Continental's Shoshone Indian Lease-766 3, nw nw sw 6-6n-3w, 180 bbls, Tensleep, 369-561 ft.

Pilot Butte: British-American's Enos 1, cel ne nw 22-3n-1w, abnd 3366 ft.

Pilot Butte—New Zone Discovery: British-American's Stock 1, 21-3n-1w, pump 103 bbls, 80% water, Embar, casing perf 6150-6210 ft, dr 80 ft Tensleep to td 6750 ft dry, pb to 6671 ft.

Superior and British-American's Tribal 2, ne nw sw 15-3n-1w, flow 500 bbls, Tensleep, 6250 ft.

Natrona County—Cole Creek: General's 77-21-G, nw se se 21-35n-77w, pump 200 bbls, Shannon, 4567 ft.

Niobrara County—Lance Creek: Continental's Apex-1 7, sw ne ne 34-36n-65w, pump 25 bbls, Basal Sundance 4095 ft, td 4125 ft.

Park County—Oregon Basin: Ohio's Sarah 5, nw ne se 32-51n-100w, pump 500 bbls, Embar, 3670 ft.

Ohio's Wilson 3-A, nw ne nw 4-50n-100w, pump 380 bbls, Embar 3775-79 ft.

WYOMING WILDCAT START

Fremont County: British-American's Government 1, nw nw sw 32-4n-1w, Steamboat Butte structure, 4 miles north of recent deep Embar and Tensleep discoveries old Pilot Butte field, digging cellar.

COLORADO WILDCAT COMPLETIONS

Boulder County—Failure: Minnelusa Oil Co., Broderick & Gordon et al's Borra 1, se se sw 5-1s-69w, Louisville area, abnd Lakota 9624 feet.

Routt County—North Tow Creek: Broderick & Gordon's 1, c se sw 18-7n-86w, North Tow Creek, abnd granite 3270 ft.

MONTANA FIELD COMPLETIONS

Glacier County—Cut Bank: Frances Oil Co.'s Tribal 3, c ne 30-32n-5w, swab 260 bbls, Cut Bank 2780 ft, shot 220 qts, td 2831 ft.

National Parks Oil Co.'s Chatterton 1, se sw ne 22-32n-6w, Upper Cut Bank 3320-79 ft, abnd 3393 ft.

Texas Co.'s Storey 1, c nw ne 31-32n-5w, swab 25 bbls, Upper Cut Bank 2715-65, td 2775 ft.

Texas Co.'s Government 5, c ne nw 17-32n-5w, swab 35 bbls, Lower Cut Bank 2875-90, td 2915, elev 3697 ft.

W. F. Saunders' Tribal 2, c se se 24-32n-6w, swab 220 bbls, Lower Cut Bank 3061-76, td 3086, elev 3717 ft.

Toole County—Kevin-Sunburst: Consolidated Gas Co.'s Fee 1, c ne sw 3-32n-2w, .750 gas, 1565 ft.

Hardrock Oil Co.'s Waite 6, ne ne sw 12-35n-2w, pump 18 bbls, Ellis-Madison contact 1532-40, td, shot 40 qts, 1000 gals acid.

Kal-Bar Oil Co.'s Fee 3, c ne se 13-35n-2w, swab 150 bbls, Ellis-Madison contact 1515, 500 gals acid, td 1606 ft.

Neptune Oil & Gas Co.'s Seabrook 8, sw ne sw 19-35n-2w, pump 10 bbls, 1000 gals acid, pb 1534 from td 1550 ft.

MONTANA WILDCAT COMPLETIONS

Glacier County—Discovery: Ed Reagan et al's Tribal-194 2, c nw ne 27-37n-7w, flow 96 bbls, Madison lime, pb 3899 from td 3906 ft.

Pondera County—Discovery: R. C. Tarrant's De Staffany 1, c nw ne 30-28n-1w, pump 5 bbls, 43-gravity, Sunburst 1725-45 ft, td 1746 feet.

It's not packing—it's **RE-packing** *that's really expensive*... That's why it pays in dollars and cents to use the best packing money can buy. J-M Sea Rings are that kind of packing.

They're custom-made to fit specific operating conditions. Entirely automatic, they seal on the work stroke, release on the return, thus reducing friction and wear on both packing and rod. During the past 25 years many engineers have accepted Sea Rings as the standard packing for reciprocating rods and plungers operating against steam, water, air, brine, oil, gasoline and many other fluids and chemicals.

For details on J-M Sea Rings and the complete line of J-M Packings and Gaskets, write Johns-Manville, 22 East 40th Street, New York, N. Y.

JM

Johns-Manville PACKINGS & GASKETS

THERE'S A DISTRIBUTOR NEAR YOU

CONSERVE
Boilers and Tubes

Sand-Banum Automatically

removes and prevents scale and corrosion while your equipment operates.

"The Entirely Different Boiler and Engine Treatment"

Don't take our word for it. Send for proof and details of performance. It will do for you what it has so consistently done for others.

AMERICAN SAND-BANUM COMPANY, Inc.
9 Rockefeller Plaza New York City

Forging Ahead

For the American Victory

OIL CITY BRASS WORKS
FOUNDERS · MANUFACTURERS · MACHINISTS
Beaumont, Texas, U.S.A.

FILTRATION
Systems and Service

Efficient, economical filtration systems for salt water disposal or feed water purification. Standard filtration methods are intelligently applied to assure proper coagulation and crystal clear effluent.

Fast Deliveries — Dependable Service

GULF ENGINEERING CO., INC.
"Service, Not Promises"
307 M & M BUILDING HOUSTON, TEXAS
916 S. PETERS STREET NEW ORLEANS, LA.

Men in the Industry's News

DR. R. P. DINSMORE has been given an indefinite leave from his position as research and development chief of The Goodyear Tire & Rubber Company to go to Washington to organize and coordinate the nation's effort in development of synthetic rubber.

Dr. Dinsmore is assuming his new duties immediately as a key member of the Jeffers rubber administration. He will build a staff of technical exports to supervise all research in the field of synthetic rubber in the industrial and academic laboratories of the country. His group also will exercise advisory oversight in the design, layout and equipment of the synthetic rubber plants now being erected in various parts of the country as part of the national production program.

G. D. THOMAS of Shell Oil Company was elected president of the Shreveport Geological Society October 5. R. M. Wilson of The Ohio Company was named vice president while T. H. Philpott of The Carter Oil Company was elected secretary-treasurer. A. F. Crider, society historian, gave a history of the organization from its beginning in 1919 to the present. Meetings will be held the first Monday of each month, October to May, inclusive.

DR. CHARLES LAURENCE BAKER, head of the department of geology of Texas A. & M. College, addressed the Houston Geological Society October 22 on "Geosynclinal Thicknesses."

C. D. LOCKWOOD of Houston, publisher of Lockwood's Oil Report until October 10, has been appointed assistant director in the OPC research division, it was announced October 14. Lockwood has traveled extensively in Europe and Asia and he served with the AEF in World War I. He succeeds Oliver S. Ambrose who has returned to Tide Water Associated Oil Company.

Rinehart Oil News Company of Texas, publishers of Rinehart's Oil Reports, has taken over and will service Lockwood's subscribers. The change was effective October 12. An announcement said there will be no change in the present Rinehart oil news and analytical service which will go to Rinehart and Lockwood subscribers alike.

CLIFTON M. KEELER, formerly consulting petroleum engineer and geologist of Texas and Oklahoma, has been recently appointed on the food administrators staff of A.M.A. in the West Indies. He is temporarily stationed at St. Thomas, Virgin Islands; headquarters at San Juan Puerto Rico.

K. R. VAN TASSEL has been appointed manager of sales of the newly formed integral-horsepower motor section of the General Electric Company's motor division. At the same time it was announced that D. A. Yates, of the same division, had been placed in charge of the Lynn Motor Group at G-E's Lynn, Massachusetts, plant.

J. W. VAIDEN, vice president in charge of manufacturing, and T. J. Dockweiler, attorney of Los Angeles, were named to the board of directors of Skelly Oil Company at the annual meeting October 19 in Tulsa. W. G. Skelly, president, C. C. Herndon, executive vice president, H. M. Stalcup, vice president of production, F. T. Hopp, secretary-treasurer, A. H. Hyden, vice president, J. D. Powe, vice president in charge of marketing, Emil Kluth and Fero Williams, directors, were renamed to the board.

R. D. SCHUMAKER, assistant chief scout for Mid-Continent Petroleum Corporation, Tulsa, has resigned to accept a similar position with Skelly Oil Company, Tulsa.

H. F. WRIGHT addressed Tulsa Geological Society October 19 on "Valuation of Oil Reserves."

D. W. WHITLOW has accepted a position with Republic Supply Company at Tulsa. Until the move, Whitlow had been with Bridgeport Machine Company.

V. G. COLE has been named district geologist of the Wichita, Kansas, area for Gulf Oil Corporation, succeeding Anthony Folger who is entering consultation work.

C. W. DAVIS, Davis Drilling Company, Holdenville, Oklahoma, has been named on the Hughes County (Oklahoma) war price and rationing board.

R. S. COOKE, Carter Oil Company engineer in the Seminole area, has been transferred to Great Bend, Kansas.

B. B. HAYES, Skelly Oil Company, has transferred from the land department office at Ardmore to the general office at Tulsa.

COLONEL WALTERS, old-time auctioneer of Indian lease sales in Oklahoma, wields the hammer again in Pawhuska after an extended absence.

H. G. COLE, Phillips Petroleum Company engineer, has transferred from Aetna, Kansas, to Oklahoma City.

MARCUS T. McGRIFF was recently appointed manager of stores and sales of the supply store department of International Derrick and Equipment Division of International-Stacey Corporation, Columbus, Ohio. McGriff came with the company four years ago to organize this department and has been active in developing this branch. He is a native of Alabama and received his education in Alabama and North Carolina. He has been a resident of Shreveport, Louisiana, for 15 years. From 1928 to 1932 was spent with Peden Iron & Steel Company's oil well supply department. After leaving Peden, he operated as a manufacturer's agent for several large manufacturing firms until his present affiliation.

ROBERT LEE BLAFFER, former president and later chairman of the board and treasurer of Humble Oil & Refining Company, and pioneer Texas oil man, died October 22 in Toronto, Canada. One of the organizers of Humble, Blaffer retired as chairman of the board August 4, 1941, after spending about 40 years in the oil industry.

Blaffer was born at New Orleans, Louisiana, August 5, 1876. He was a graduate of Tulane University. He later moved to Beaumont and became associated with W. S. Farish, now president of Standard Oil Company (New Jersey), in 1902. This was in the early days of the Spindletop boom and the firm of Blaffer & Farish was one of the organizations that went into formation of Humble Oil & Refining Company when it was organized in 1917.

Blaffer was one of the original organizers, directors and vice presidents. In 1919 he took over office of treasurer which he continued to hold until his retirement. He was elected president in 1933, succeeding Farish, and was named chairman of the board in 1937.

Blaffer was active in civic and commercial affairs. He was a director of Reed Roller Bit Company, a member of board of trustees of The Rice Institute, director and chairman of board of South Texas Commercial National Bank, and other boards. In April, 1941, he was appointed regional coordinator of OPM.

J. M. HARRIS has recently been appointed chief engineer of Well Equipment Manufacturing Corporation, replacing H. B. Madder who resigned. Harris is in charge of tool designing, estimating, and design of new equipment. Formerly, he was associated with Texasteel Manufacturing Company in a similar capacity. He has had college engineering training, along with plant production experience.

C. M. POWELL, recently appointed manager of oil field equipment for International Derrick and Equipment Company of Columbus, Ohio, is a native Texan, born near Decatur. After serving in World War I, he became interested in the oil-well-equipment business and was associated with many of the early boom fields.

Joining International Derrick and Equipment Company in 1925 as district manager of Oklahoma, Powell was division manager of Oklahoma, Kansas, and Illinois, and Indiana at the time of his new appointment. Before this connection he was assistant sales manager of Bridgeport Machine Company, and district manager of Black, Sivalls and Bryson, Inc., working out of Wichita Falls, Texas. He now resides at Tulsa.

GLENN STALEY, chairman of the engineering division of the Lea County Operators Committee, has returned to headquarters at Hobbs, bearing a commission as captain in the New Mexico State Guard after undergoing training at Camp Bullis, San Antonio. He is a veteran of World War 1.

AL P. GROEBL, co-owner of Westex Oil Company, Big Spring, Texas, has enlisted as a private in the Air Corps.

J. J. PERKINS, Wichita Falls operator, has given $100,000 to the North Texas Conference of the Methodist Church to provide income for retired ministers.

JAMES BASKIN of Cameron has been appointed chief supervisor of Oil and Gas for the Texas Railroad Commission, effective October 17. For several years Baskin has been in the proration division of the commission and was chief clerk and statistician at the time the promotion was ordered. Clinton Owsley, who had been chief supervisor, was given the job which Baskin vacated.

W. A. CLARK of Schlumberger Well Surveying Corporation, Houston, has been commissioned a lieutenant in the Navy, and will report for active duty immediately.

J. S. COSDEN, JR., president of Cosco Oil Company, which operates an asphalt refinery at Wynnewood, Oklahoma, has joined the Marine Corps.

TOM S. ANDREWS has been promoted to sales manager of Well Equipment Manufacturing Corporation, Houston. He became associated with the company in January, 1940. His sales work covers a number of years of similar training, coming to his present connection from the De-Scaler Equipment Corporation where he was sales manager covering Texas and Oklahoma.

RICHARD E. GILE, Midland, Texas, consulting geologist, has been appointed West Texas-New Mexico division geologist for the Bay Petroleum Corporation, which has established an operating office at Midland. C. U. Bay of New York and Roland V. Rodman of Denver are president and vice president, respectively, of the new entrant into the Permian Basin.

CAPT. G. FRANK ALDRICH, Midland, Texas, geologist and operator, has reported for duty with the Army at San Antonio, having held a commission in the reserves the past 15 years.

AMON G. CARTER, Fort Worth publisher and co-discoverer of the Wasson field, second largest in West Texas, arrived in England the past week wearing the uniform of a war correspondent.

Squeaks from the Bull Wheel

Contradictory

"I have noticed one odd thing about blunt people."

"What is it?"

"They are the ones who generally come to the point most quickly."

Any Excuse in a Storm

An Indiana boy told his teacher that his sister had the measles. The teacher became somewhat excited. "You go right home, Johnny," she demanded, "and don't you come back until your sister is well."

Johnny left in a hurry. After he was gone, another boy held up his hand and said, "Teacher, Johnny Dolan's sister what has the measles is in Boston."

Some Reason

The draftee on his way to camp asked a stranger, Draftee Number Two: "Do you happen to have a match?"

"Sure," was Number Two's reply, "but I'm not giving you any."

"But why?" was the startled reply.

"Well," said Two, "we'll get to chinning. And if we get to chinning we'll wind up buddies. And if we're buddies we'll get in the same tent. If we are in the same tent and same squad, then we'll both volunteer together for special missions. Maybe we'll even get a dangerous night job; then we'll have to use flashlights. And if the flashlight should happen to go out some night in enemy territory, I sure don't want to be stranded with someone who doesn't even carry matches."

Try Again

"Take dancing lessons? Never! There are too many other ways by which I can make a fool of myself."

"Yes, darling, I know; but you've tried all of those."

Another Excuse

He was always late, and always had a different excuse. Arriving an hour late one morning, he was greeted by the boss with:

"Well, Brown, what's your story this time?"

"Well, sir, my daughters were afraid of the storm last night and turned the mirror on the mantlepiece round to the wall. When I came downstairs this morning I couldn't see myself in the looking glass, and, naturally, I thought I'd gone to work!"

Home Guard

Mike: "Just think! I was out with some of the fellows last night, and a burglar broke into our house."

Jake: "Did he get anything?"

Mike: "I'll say he did — my wife thought it was me coming home."

Notes for the Equipment Buyer and User

Welding Electrode

AIR REDUCTION SALES COMPANY

An electrode designed specifically for all-position welding of mild steel with A-C type welding machines has been developed by Air Reduction Sales Company in the following diameters: 1/8- and 5/32-inch.

Made to fill a rapidly growing need for a high quality A-C electrode for all-position use, Airco No. 230 electrode complies with all requirements of the American Welding Society Classification E6011, American Bureau of Shipping, Group H1G and B1G for A-C and other specifications qualifying it for use on war work.

Physical tests demonstrate that this electrode gives exceptionally satisfactory results. The high quality of deposited metal of the No. 230 is fully comparable to that of the best D-C reverse polarity all-position electrodes.

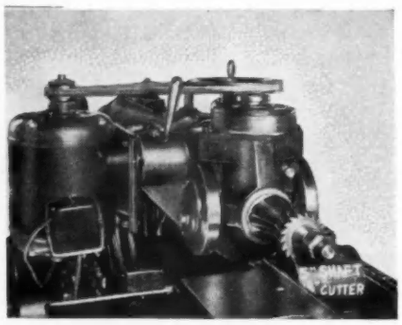
An outstanding characteristic of this A-C electrode is that average operators have no difficulty in securing good fusion and complete penetration. The finished weld deposit is quite smooth and has a uniform surface contour.

Shaper Mill

BRAUER MACHINE & SUPPLY COMPANY

Brauer Machine & Supply Company, Oklahoma City, has announced the universal shaper-mill to handle all types of milling jobs. The mill is equipped with spiral bevel gear drive and has roller bearings throughout. The gearing and bearings provide noiseless and accurate operation. Spindle turn-out is guaranteed to be less than 0.001 inch.

Twelve or more spindle speeds of from 60 r.p.m. to any speed required may be obtained by interchanging pulleys on motor and mill. Five pulleys are



Brauer Shaper Mill

supplied, two for motor and three for mill.

The shaper-mill is easily fitted to different sizes of shapers since the adapter cradle is first rough-machined and then machined to fit the ram on the shaper on which it will be used. The attaching and running of the mill is as follows: the compound head is removed from the shaper ram and shaper-mill bolted in place. Shaper stroke is set on zero, and the tool-spacing screw in ram is used to run ram in or out; then the ram is locked in position with the set screws behind ram gibb. The shaper is then run to operate cross-feed. Then the operation is that of the ordinary milling machine.

Welding Accessories

General Electric Company, Schenectady, New York, has issued a new and attractive 32-page bulletin, GEA-2704B, entitled "Arc Welding Fitness."

Profusely illustrated throughout, the bulletin presents a complete line of General Electric accessories, all designed to make arc welding safer and easier.

Bearing Lubrication

"A Guide to Better Bearing Lubrication" distributed by SKF Industries, Inc., Philadelphia, manufacturers of ball and roller bearings, fills a vital need in all industries. Thirty-two pages are filled with designs, formulae, and graphs which explain the highly technical text.

Subjects treated include the functions of lubrication, oil lubrication, recommended viscosities, oil supply systems, oil bath, circulating systems, spray or mist lubrication, wick feed, oil with compressed air, grease lubrication, how grease lubricates, ABEC grease standard, operating conditions, greasing intervals, grease supply systems, housing with grease fittings, housings without grease fittings, grease chamber lubrication, comparative advantages of oil and grease, high-temperature applications, minimum friction applications, protection against moisture, protection of idle machinery, cleaning.

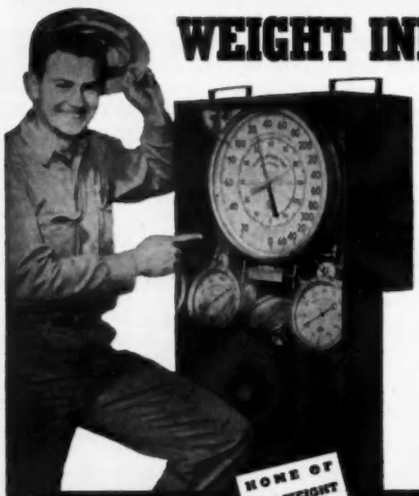
National Supply Plant Given Army-Navy "E"

The Army-Navy "E," joint Army and Navy production award, was presented to the Ambridge, Pennsylvania, plant of The National Supply Company, October 2 at Ambridge high school stadium, before a crowd of approximately 6000, comprised of more than 2200 employes and their families.

Principal speaker on the program was Brigadier General Hugh C. Minton, district chief of the Pittsburgh Ordnance District. He presented the "E" pennant to A. E. Walker, president of the company. Lieutenant - Commander C. E. Egeler, officer in charge of naval inspection for the Munhall (Pittsburgh) area, awarded the first Army-Navy "E" pin to oldest employe, A. D. Adams.

An interesting highlight of the event was the appearance on the program of Lieutenant Dick Adams (USNR), son of the oldest employe, who had just returned on furlough from active duty in the Pacific area.

Brig. Gen. H. C. Minton (left) and A. E. Walker, president of the National Supply Company, display the Army-Navy "E" Pennant awarded the Ambridge plant of The National Supply Company. General Minton made the principal address.



WEIGHT INDICATOR POINTS

IT'S NO ACCIDENT that the Martin - Decker Unitized Mud Pump Gauge is the world's finest, most sensitive and rugged instrument for measuring slush pump pressure. The oil industry's leading weight recording measurement and control concern devoted years of development work to combining a special indicating gauge, a patented diaphragm unit, and a built-in pulsation damper in one unitized instrument requiring no tubing or fittings for connection. And best of all, it can be moved from location to location on a moment's notice.

MARTIN HOME OF THE WEIGHT INDICATOR DECKER CORP.

LONG BEACH, CALIFORNIA

SAN JOAQUIN VALLEY: A. F. McQUISTON, BAKERSFIELD, CALIFORNIA
MID-CONTINENT DISTRIBUTOR: REED ROLLER BIT COMPANY, HOUSTON, TEXAS